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# A Shared Vision

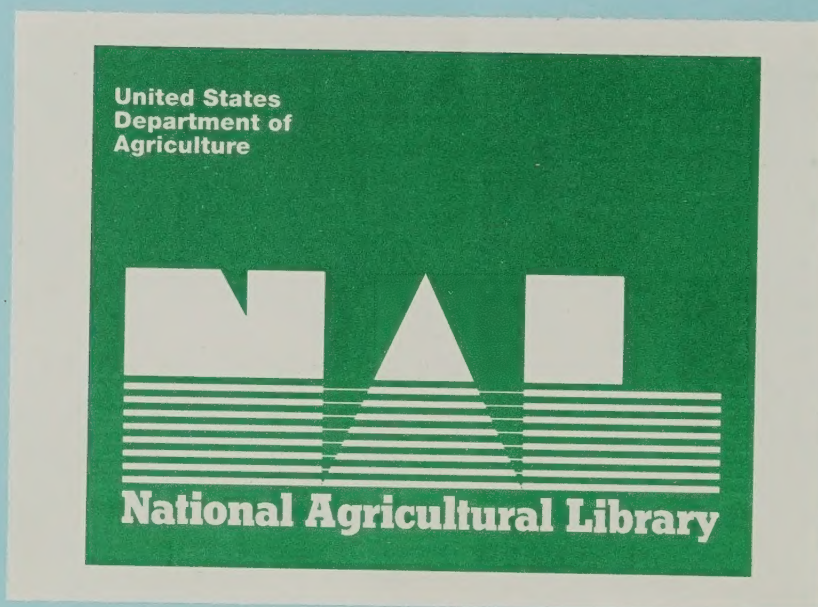
Evaluation of the CCFI Project  
for Northern Ghana



Prepared by and for



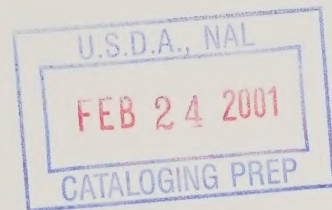




This evaluation was made possible because of the collaboration engineered into the Forest Resources Management II Project (FRM II; Number 936-5556).

FRM II is funded by the U.S. Agency for International Development, Bureau for Research and Development, Office of Environment and Natural Resources (AID/R&D/ENR). The project is implemented through a variety of mechanisms including a Participating Agency Service Agreement (PASA) with Peace Corps and a PASA and Resources Support Service Agreement (RSSA) with USDA Forest Service and Office of International Cooperation and Development (OICD).





Evaluation of:

The Collaborative Community Forestry  
Initiative for Northern Ghana

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April 1992

# COLLABORATIVE COMMUNITY FORESTRY INITIATIVE

## SITE LOCATIONS

(Existing and Proposed As Of 9/1/91)





## EXECUTIVE SUMMARY

The evaluation team found the CCFI project singularly impressive due to the commitment and dedication demonstrated by the participating groups, communities, and individuals associated with it. Although only in its third year, the project has established 11 community nurseries which produced almost 700,000 seedlings in 1990 - a very impressive accomplishment. Using the process of the annual review workshop, project participants successfully address and resolve problems and with the continued commitment of project staff, CCFI will have an even greater impact in the future. The CCFI project is not unlike many other projects. Problems and "glitches" in the project management require changes and a wide variety of issues need to be resolved. However, the project has been successfully implemented and is now in a position to increase its impact and effectiveness.

To assist CCFI in reaching its full potential, the evaluation team makes the following recommendations:

RECOMMENDATION NO. 1: It is recommended that CCFI financial management incorporate the following:

- a. The project should have a separate budget against which all related expenses are charged. The CCFI budget should be reflected in the ADRA/Ghana budget as a separate line item.
- b. The budget presented to the CCFI collaborators at the annual review workshop should be the actual CCFI budget. Once the budget is approved, any subsequent changes should be communicated and approved by all the collaborating partners.
- c. To assist in wise project decision making, a quarterly financial statement should be made available from ADRA/Ghana to all collaborators.

RECOMMENDATION NO. 2: It is recommended that an assistant to the Coordinator be hired to keep records and establish an accounting system that would track the expenses of each site.

RECOMMENDATION NO. 3: The practice of holding annual review workshops should be continued and should incorporate the following components:

- a. The workshop should be timed to take place immediately after the Volunteers are sworn-in annually so they may also attend.
- b. The workshop should be designed to review the goals of the CCFI project and the previous year's accomplishments with the majority of session time devoted to problem solving.
- c. Funding for the workshop should be included in the CCFI annual budget.
- d. An experienced facilitator who does not have a direct relationship to the project should facilitate the workshop. Preferably this person would be Ghanaian.



RECOMMENDATION NO. 4: It is recommended that the CCFI Community Committees be reestablished and incorporated into the "CCFI process" in the following way:

- a. The Committees should be reestablished in a culturally acceptable manner, one conforming to the way each particular village selects community members as representatives.
- b. At least one member of each CCFI Community Committee should attend the annual review workshop.
- c. The CCFI Community Committee should receive training that will personally benefit the members and assist them in becoming more able to function as a CCFI advisory group.
- d. Thought should be given as to how the CCFI Community Committee members could receive compensation or other recognition for their efforts on behalf of the project.

RECOMMENDATION NO. 5: It is recommended that the following issues be addressed as soon as possible. Resolution of these issues will greatly improve CCFI operations and effectiveness. These issues are:

- a. Training
- b. Sale of forest tree seedlings
- c. Cash Generation
- d. Compensation for the CCFI Community Committees
- e. Appointment of nursery managers
- f. Communication & dissemination of information
- g. Budget preparation
- h. Traditional versus pilot approach
- i. Species of seedlings produced
- j. Future site selection

Since the project is moving into the "training" stage of activities, training is considered the most important issue to address and resolve.

A draft of this report was sent to the CCFI National Committee in January 1992 for their review and comments. From the Committee's response (Part III : CCFI National Committee Response to Evaluation) it is evident that many of our recommendations have already been implemented or addressed and that the annual review workshop, in particular, continues to serve as the primary forum in which issues of this nature are discussed and resolved.



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## ACRONYMS

ADRA	Adventist Development and Relief Agency
AFR/ARTS/ FARA	Africa Bureau/Analysis, Research and Technical Support/ Food, Agriculture, and Resource Analysis
FHA/FFP/ AFR	Food and Humanitarian Assistance Bureau/Food for Peace/ Africa Region
APCD	Associate Peace Corps Director
CCFI	Collaborative Community Forestry Initiative
CDR	Committee for the Defense of the Revolution (Village level political entity)
CRS	Catholic Relief Service
EEC	European Economic Commission
EPC	Environmental Protection Council of the Government of Ghana
FD	Forestry Department of the Government of Ghana
FFW	Food-for-Work
FENR	USAID's Forestry Environment Natural Resource Program
FSP	Forestry Support Program (USDA/Forest Service)
FY	Fiscal Year
GBC	Ghana Broadcasting Corporation
GOG	Government of Ghana
MYOP	Multi-Year Operational Plan (Budget and plan submitted to USAID for approval)
NGO	Non-Governmental Organization
NORRIP	Northern Region Rural Integrated Program
ODA	Overseas Development Agency (British government donor organization)
OTAPS/ENV	Office of Training & Program Support, Environment Sector (Peace Corps)
PASA	Participating Agency Service Agreement
PC	Peace Corps of the United States
PCD	Peace Corps Director
PCV	Peace Corps Volunteer
PNDC	Provisional National Defence Council (Ghanaian political entity at the national level)
PL-480	Public Law #480, U.S. law governing internationally provided food aid
PST	Pre-Service Training (for PCVs)
PTO	Programming & Training Officer, Peace Corps
RSSA	Reciprocating Service Support Agreement
S&T(R&D)	USAID's Bureau for Science & Technology (Now the Bureau for Research & Development)
UNDP	United Nations Development Program
USAID(AID)	United States Agency for International Development
USDA	United States Department of Agriculture
VSO	Volunteer Service Overseas (British volunteer service organization)
WB	World Bank

## ACKNOWLEDGEMENTS

The members of the evaluation team would like to express their thanks to the following people who made this evaluation possible. These people include: George Mahaffey, Manager of OTAPS/ENV, U.S. Peace Corps; Gary Wetterberg, Program Manager, FSP; John Francois, Chief Conservator of Forests, Forestry Department, GOG; Israel Agboka, Director, ADRA/Ghana; David Taylor, Director of Planning, ADRA/USA; John Goldrick, Director of Peace Corps/Ghana; Steve MacFarland, Associate Peace Corps Director, Peace Corps/Ghana; Dan Deeley, Forester, AID/R&D/ENR ; Tim Resch, Forester, AID/AFR/ARTS/FARA; Joe Langlois, AID/FHA/FFP/AFR.

The team would also like to thank all of those interviewed, including: Steven Joyce, Trainer, Training Resource Group; Ed Birgils, Acting Director, Peter Wiesel, Program Officer and Emmanuel Atieku, Program Assistant, USAID/Ghana; Adam Abu, Deputy Conservator of Forests, GOG; Mr. W.B.Ire, Regional Forester, Upper West; Sammy Antwi, CCFI Coordinator; David Taylor, Godfrey Ntim, Asst. Director of Planning and Abigal Abandoh, Asst. Director of Commodity Programs, ADRA/Ghana; Mr. Fusini, Director Amasachina; Ed Butler, Former PCD, James Lassiter, Former PCD, Virginia Wolfe, Former PTO, and Ben Baah, APCD, PC/Ghana; Jonathan Allotey, Program Officer, EPC; Amy Schrock, PCV and Issah Asurduna, Nursery Foreman, Bongo; David Banks, PCV, Zebella; Joshua Bunker, PCV, Tempane; Jamie McGowen, PCV, Tizza; Leigh Ann Spence, PCV and Reverend Pastor John Bagolur, Chairman CCFI Community Committee, Sankana; Larry Lutz, PCV, Chereponi; Brian Mumma, PCV, Libga and Zacheria Abukari, Nursery Foreman, Libga; Reverend Jacob and Samuel Atotura, Yurwelko; Al-Hassame Sahfu, Tolon; and Tracy Roberts, PCV Salaga

The evaluation team would particularly like to thank the community members and nursery workers from Tolon, Bongo, Tongo, Zebella, Tempane, Tizza, Libga, Salaga, Yurwelko, Sankana and Chereponi who took time to answer what possibly were considered "strange and unusual "questions".

The team is grateful to other members of the Ghanaian Forestry Department, Adventist Development and Relief Agency, U.S. Peace Corps, and the United States Agency for International Development who assisted the team.

A special thanks are due Sammy Antwi and Ben Baah who spent long hours taking team members on a "whirlwind" trip to all the CCFI sites in Northern Ghana. Lastly, thanks to Andrew Burnett for his helpful editorial comments.



## PREFACE

The Collaborative Community Forestry Initiative (CCFI) is a project that involves seven organizations: the Adventist Development and Relief Agency (ADRA); the Forestry Department (FD) of the Government of Ghana; the U.S. Peace Corps (PC); Amasachina; the Environmental Protection Council (EPC) of the Government of Ghana; the U.S. Agency for International Development (USAID); and the individual communities themselves. Collaboration between these entities exists not only at the "Accra" level, but also at the "Washington" and field levels as well.

The collaborative nature of the CCFI project has evolved since the original discussions on project planning between the initial collaborating partners. The collaborators themselves developed the project design through a participatory workshop process which proved to be an exciting and fruitful task. All the participants put in long days and participated in "stormy" sessions where conflicting opinions were resolved. Besides producing the project design itself, the participatory project design process was instrumental in developing the strong sense of commitment felt by all those connected with the project.

The CCFI project is impressive in the field. In just two years the project established 11 community tree nurseries which are producing almost 700,000 seedlings per year. Nursery workers are being trained, and in most cases, the nurseries are functioning smoothly.

As mentioned above, the close collaboration of the entities, and the ongoing workshop process has fostered a very strong sense of commitment to the project by all those involved. This was demonstrated on numerous occasions when the project was faced with difficult problems that might have terminated other projects. This sense of commitment is also present in the field where CCFI personnel have demonstrated a high level of job satisfaction and dedication in spite of often being overworked.

CCFI is an impressive project, but like any other, it has some problems that should be resolved immediately. Also, there are issues that need to be discussed and agreement reached on how they are to be addressed. Resolution of the problems and decisive action with regard to these issues will enable more effective management and field operations.

## CCFI EVALUATION PROCESS

The goal of the CCFI evaluation is to provide the project collaborators with information and recommendations on various project management issues which will strengthen and increase the effectiveness of the project. The evaluation team's first task was to gather sufficient information upon which solid recommendations could be based. This required field visits and interviews with people associated with the project, both currently and formerly<sup>1</sup>. A few interviews were conducted in July 1991; however, most were conducted in Ghana during the August 16 through September 7, 1991 field visit. During this trip, each of the current CCFI sites was visited by a member of the evaluation team.

The team developed an evaluation "questionnaire" which was used as a guide in conducting interviews<sup>2</sup>. Although the questionnaire is lengthy, the interviewees were only questioned about topics on which they had direct knowledge or experience.

With some modification, the same questionnaire provided the basic outline for the evaluation report. To provide ease of reading, the report is divided into four parts:

- Part I:** Project Background, Project Development, Collaboration, and The CCFI Conceptual Model. For readers unfamiliar with the CCFI project, this will provide an overview of the project and an explanation of the project development process.
- Part II:** Project Management, Food Aid Management, Funding, Project Accomplishments, Lessons Learned, and Project Issues. This will provide the reader with an understanding of current project operations as well as the recommendations of the evaluation team.
- Part III:** The response of the National CCFI Committee to the team's draft evaluation report.
- Part IV:** Appendices that will provide the reader with more details on the project and the individual sites. They should be of particular interest to those contemplating a similar project.

The Project Issues section in Part II is designed to reflect some of the different viewpoints on the major issues. Hopefully, the "points of view" presented will stimulate thought and discussion and, in so doing, assist CCFI staff to address and resolve these issues. The evaluation team felt that the project currently has an effective mechanism in place to deal effectively with issues - the annual review workshop.

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<sup>1</sup>A list of those interviewed is found in Appendix 2.

<sup>2</sup>The complete questionnaire is found in Appendix 1.



## **PART I: OVERVIEW**

Part I provides the background of events leading up to the development of the CCFI project. It also provides an understanding of the project development process, the collaborative nature of CCFI, and the conceptual model used to organize the project.

### **PROJECT BACKGROUND<sup>1</sup>**

There was high-level government support for initiating community forestry activities long before the CCFI project began. On June 4, 1982, the Chairman of the PNDC, Flt. Lt. J.J. Rawlings launched a National Tree Planting Week in Accra by stating, "I recommend to all local CDRs including those in the Northern and Upper Regions to consider this matter (of community forestry) seriously so that near all our towns and villages there can be established fuelwood plantations."<sup>2</sup>

Just prior to this event, USAID and Peace Corps (PC) sponsored the Anglophone Africa Forestry/Natural Resource Workshop held in Mombasa, Kenya, May 23 - 29, 1982. Ghana was represented at this workshop by Kwisi Kese, Deputy Chief Conservator of Forests, Ross Kraemer, APCD PC/Ghana, and Thomas DeMeo, Forestry Volunteer PC/Ghana. The community forestry project plan developed by the "Ghana Team" was strikingly similar to the CCFI project. (Tolon, a current CCFI site, was even identified as a project site). At this time serious economic difficulties and several years of severe drought had depleted all available government resources that might have been used to implement the project.

In March of 1984, the USDA Forest Service Forestry Support Program (FSP), funded by a RSSA with USAID/S&T/FENR, prepared and issued a report entitled "Food Aid and Forestry."<sup>3</sup> This report indicated that there were a considerable number of natural resource projects being supported with food aid, but information on these projects and their accomplishments was lacking. To provide this information and identify the optimal implementation conditions for a food-aid supported project, a seven-country assessment was carried out between January 31, 1984 and March 11, 1984.<sup>4</sup> The results of this assessment provided new information which was used as the basis for the USAID/Peace Corps sponsored Food Aid and Natural Resources Programming Workshop held in Mombasa, Kenya, May 25 to 29, 1987.

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<sup>1</sup> A time line showing significant events in the CCFI project history can be found after the section on Project Development.

<sup>2</sup> "Proceedings of the Anglophone Africa Forestry/Natural Resources Workshop," Office of Program Development, Peace Corps, May, 1982.

<sup>3</sup> Clement, Peg; "Food Aid and Forestry: Ongoing and Recently Terminated PL 480 Supported Forestry Projects Worldwide," Forestry Support Program, USDA Forest Service, March, 1984.

<sup>4</sup> The field assessment was conducted in seven countries: Ghana, Senegal, Niger, Rwanda, Kenya, Somalia, and Lesotho.

At this workshop the participants representing Ghana<sup>5</sup> hammered out the framework for a community forestry project in Northern Ghana. In the final workshop session, country teams developed action plans for the teams' post-workshop activities. The Ghana team's action plan called for an in-country team meeting in June to be followed by a project identification workshop in October 1987 which would involve other organizations not represented in the Mombasa workshop.<sup>6</sup> Thus, the Ghana team laid the foundation for initiating a project development process.

## **PROJECT DEVELOPMENT**

Project development took place through a series of participatory workshops. The first workshop dealt with project identification, the second with project design and planning, the third with project pre-implementation, and the fourth workshop with project start-up. CCFI now conducts an annual project review workshop which has maintained and integrated the participatory approach initially adopted by the project.

**Project Identification Workshop:** Thirty participants attended the first Ghana workshop held in October 1987. The goals of this workshop were:

1. To conduct problem analysis from which participants could identify specific environmental problems facing Ghana.
2. To agree on which problem the group would address.
3. To agree on how the different organizations would collaborate on a project that would address the problem.

The workshop had two parts: the first was a three-day field trip to the northern part of Ghana to observe problems first hand and the second was a one-day workshop held in Accra. The participants were also asked to identify their agencies' organizational strengths and how their agencies could collaborate on a project to address the identified problem. The participants agreed to collaborate on a project that would set up twenty tree nurseries in the environmentally stressed part of Northern Ghana. They also agreed to hold a three-day workshop in December to design and plan the project and to begin to investigate funding options.

**Project Design and Planning Workshop:** This workshop was held December 9-11, 1987 and the goals were:

1. To raise awareness within the development community of issues facing the natural resource sector in Northern Ghana.
2. To provide technical information on agroforestry and watershed management.
3. To plan for implementation of the natural resources initiative in Northern Ghana.

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<sup>5</sup>The participants representing Ghana and their organizations were: Adam Abu, Principal Conservator of Forests, Ghanaian Forestry Department; Carl Foreman, Director and Fred Anang, Project Officer of the Catholic Relief Service; Jon Eklund, APCD/Rural Development and Benjamin Baah, APCD/Agriculture of the U.S. Peace Corps; Albert Katako, Deputy Director of the National Service Secretariat; Godfrey Ntim, Agricultural Coordinator of the Adventist Development and Relief Agency; and Frank Pavich, Agriculture Officer of USAID.

<sup>6</sup> "Food Aid and Natural Resources Programming Workshop," Mombasa, Kenya, The Proceedings: May 25-29, 1987; Washington DC, August 1987.

This workshop hosted eighteen participating organizations: ADRA, Amasachina, Forestry Department, Peace Corps, USAID, EPC, National Service Secretariat (GOG), National Catholic Secretariat, Northern Region Rural Integrated Program (NORRIP), Water Resources and Research Institute, Volunteer Service Organization (VSO - a British volunteer service group), Institute of Renewable Natural Resources, World Vision, European Economic Communities (EEC), Catholic Relief Services (CRS), Overseas Development Agency (ODA - a British government aid agency), World Bank, and United Nations Development Program (UNDP). The workshop focused on defining the roles and responsibilities of the collaborating partners. As part of this process, a project organizational model was presented, discussed, and agreed upon. (For details on project organization see The CCFI Conceptual Model section). The participants also discussed the need for a technical field coordinator; developed the criteria for community selection; developed criteria for nursery design; identified prospective communities to include in the project; developed a budget; and designed the housing to be constructed for the nursery manager. The final session was used to develop a time line of tasks, responsibilities, and deadlines.

**Project Pre-Implementation Workshop:** This workshop was held in Accra in March of 1988 and the goals were to re-affirm the previous agreements and resolve issues that had arisen. Approximately forty representatives attended. The participants resolved most of their issues and reaffirmed their commitment to the project.

**Project Start-up Workshop:** The project start-up workshop took place in Accra from September 14 to 16, 1988, and representatives of the principal collaborating organizations attended. These were: Forestry Department; ADRA, Peace Corps, USAID, National Service Secretariat (GOG), Amasachina, World Bank, and representatives of the communities of Chereponi, Bongo and Salaga. Newly sworn-in Peace Corps Volunteers were also present - the first time they had been included in the process. The main features of this workshop were the presentation and review of all the previous agreements and clarification of the role of each collaborating agency. Agreements were reviewed and discussed to ensure that collaborators had a thorough understanding of their responsibilities. As a final step, participants developed six-month work plans.

**Annual Project Review Workshop:** The annual review workshop is a continuation of the participatory process initiated in the series of workshops that developed the project. The goals of the annual review workshop are:

1. To review the previous year's project accomplishments;
2. To identify, discuss and reach decisions on how to address any pending issues; and
3. To present, discuss and approve the CCFI budget.

The first two annual project review workshops were held, in September of 1989 and in September of 1990. Both of these were held in Tamale to provide easier access to the majority of participants. At the 1988 and 1989 workshops, the participants reviewed the project accomplishments and addressed the issues that came up during the previous year's operations. Plans for expansion and establishment of new CCFI sites were discussed and approved. At these workshops the Coordinator presented the budget which was discussed and approved. The workshops were five days long and included the new CCFI Volunteers in the process. Political representatives of the government were also present to learn more about the CCFI project so that they could provide better support. A third annual review workshop took place in Tamale in November 1991.



COLLABORATIVE COMMUNITY FORESTRY INITIATIVE  
TIME LINE OF SIGNIFICANT EVENTS

1982		* Kenya - Anglophone Africa Forestry/Natural Resource Workshop. A Team From Ghana Participated.
1983	--	
1984	--	* PL 480 Assessment Team Observed Programs in Seven African Countries.
1985	--	* Publication of "Community-Level Forestry Development: Options and Guidelines for Collaboration in PL 480 Programs."
1986	--	
1987	--	* Kenya - Regional Food Aid/Natural Resource Workshop. A Team From Ghana Participated. * Ghana - Natural Resource Initiative Planning Meeting. * Ghana - Natural Resource Planning Workshop.
1988	--	* Proposal Submitted for the Collaborative Community Forestry Initiative (CCFI). * Article about the New CCFI Project on Front Page of the People's Daily Graphic. * Project Start-Up Workshop. * First Group of Nurseries Established (Three).
1989	--	* CCFI Annual Review Workshop. * Second Group of Nurseries Established (Four).
1990	--	* CCFI Annual Review Workshop. * Third Group of Nurseries Established (Four).
1991	--	* CCFI Evaluation * Fourth Group of Nurseries Planned (Four). * CCFI Annual Review Workshop.
1992		

**The Participatory Process:** The participatory process used to develop the CCFI project was exciting and productive. Although skeptics predicted that it would be "just another set of workshops," the process did result in a project design that is being successfully implemented. Some of the skeptics are now among those who are the most committed to the project. There is no doubt that the participatory workshop process can be used successfully to develop and design a project with a highly motivated and dedicated staff.

## **COLLABORATION**

The collaboration aspect of the CCFI project is in many respects its greatest strength as it provides the project management with a highly credible and accountable system of checks and balances. This collaboration evolved from the initial phases of the participatory process during which the partner organizations were identified and designated members of a collaborative team. Each team member also defined the role his or her organization would play within the project. With this clear definition, it was possible to rearrange, and even replace, team members as necessary. (This proved necessary when Catholic Relief Service decided to withdraw from the project; their role of "project holder" was assumed by ADRA).

Another interesting dynamic of the CCFI collaborative effort has been the relatively small impact that individual personality has played in the project. The strong sense of commitment discourages actions that are personally motivated and fosters those activities that are for the "good of the whole." This has helped to establish and maintain a balance of power within the project.

**Keys to Collaboration:** CCFI incorporated several key ingredients that contributed enormously to collaboration and the ongoing effectiveness of the project. These ingredients are:

1. Joint training activities with the collaborative partners: the annual project review workshops.
2. Regular meetings at all levels of project management: meetings of the National CCFI Committee, the Regional CCFI Committee.
3. Designated functions of the CCFI organizational entities and their relationships to each other.
4. The early establishment of clear roles and responsibilities for all the collaborating partners at all stages of project development.
5. Establishment of a good project monitoring system: the PCV monthly reports, the Coordinator's visits, and the annual project review workshop.

**Lessons Learned in Collaboration:** Many lessons have been learned in developing the collaboration to the level that currently exists within the CCFI project. These include:

1. A variety of funding mechanisms can be combined to get a project started, e.g., money and food aid.
2. Teamwork in planning activities improves the satisfaction of all the parties involved in the process. An example of this is the annual project review workshop where all the collaborative entities have representatives present.
3. Successful collaboration can start spontaneously when all the collaborative entities share a common concern and vision about a particular issue.



4. Early joint planning, clear role identification, and close collaboration with the host government greatly improve the chances of success.
5. Continuous communication throughout the project development and implementation process is essential to success.

**Discussion of CCFI Collaboration:** While collaboration in the CCFI project is good, it needs to be improved if the project is to reach its full potential. Those who have been involved with the project throughout the last two years have noticed a decrease in the level of collaboration. "We used to meet and discuss more substantive issues," commented one person, "now I feel it is frequently a waste of time to meet." Another person commented, "ADRA is now running the project as if it were only theirs". Still another person stated, "The Forestry Department never comes out to the sites."

Comments such as these, justified or not, are strong indications that an effort should be made to renew the collaborative bonds that have made the CCFI project so successful and effective. A first step would be openly to discuss these concerns at the next annual review workshop. This type of discussion can do much to "clear the air" and lay a foundation on which a better understanding can be reached. If this is not done, the CCFI project will be in danger of stagnating at the level it has now reached and the possibility of it reaching full potential would be threatened.

**Collaboration Summary:** The CCFI project not only provides a framework for an effective community-based initiative, but also a legitimate model for other collaborative efforts that seek to operate on several levels and with a variety of partners.

### **THE CCFI CONCEPTUAL MODEL**

Ideas for the conceptual model of the CCFI project came from many sources and throughout its development many people have had a hand in molding it into final form. Initially the model was the outgrowth of the seven-country assessment conducted by Peace Corps. One outcome of this assessment was a publication that documented case studies providing guidelines on how to structure natural resource projects that use food aid resources<sup>7</sup>.

These guidelines provided the basis for a project model that was presented to participants in the December 1987 project design and planning workshop. After considerable discussion and revision the participants finally agreed on a model that can be characterized as dynamic and participatory. Based on these discussions the CCFI organization was established to include the following entities:

**National CCFI Committee:** The National CCFI Committee is composed of representatives from the Forestry Department, U.S. Peace Corps/ Ghana, and the Adventist Development and Relief Agency (ADRA)/ Ghana. The National CCFI Committee is the body responsible for overall project direction and represents the highest level of decision-making within the CCFI project.

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<sup>7</sup> Joyce, Steven and Bruce Burwell; "Community-Level Forestry Development: Options and Guidelines for Collaboration in PL 480 Programs", Peace Corps, January, 1985.

ADRA was selected by participating agencies as the "lead" implementing agency responsible for carrying out management decisions and handling finances and accounting.

**CCFI Regional Committee:** The CCFI Regional Committee includes the Regional Forestry Officers, the CCFI Coordinator, the Amasachina representative, and the Peace Corps APCD. The regional committee is responsible for overseeing field activities related to the day-to-day running of the project.

**CCFI Coordinator:** The CCFI Coordinator is hired by ADRA and is responsible for managing the CCFI project's field activities. Together with representatives from the Forestry Department, Peace Corps, and Amasachina, the Coordinator also participates in the selection and preparation of the new CCFI sites. Once the sites are established the Coordinator "services" them by distributing supplies and materials when they are needed. The Coordinator is given direction by the National CCFI Committee on overall project management and by ADRA on matters related to day-to-day management.

**CCFI Community Committees:** A CCFI Community Committee, composed of respected community members, is established at each site. Acting as a board of directors, the Committee provides advice and direction to CCFI village-level activities. The Committee was also identified as the mechanism through which a sense of ownership could be instilled in the community. Participants at the project development workshop determined that the process of selecting members would be determined by each village since most have different cultural norms for selecting representatives. The CCFI Community Committees currently vary in size, but were originally envisioned as having three to five community leaders.

**Nursery Managers:** The nursery managers permanently reside in the community and are responsible for setting up the nursery. (The nursery managers are Peace Corps Volunteers initially, however, this role is to be taken over eventually by a community member). Once nurseries are established, the managers train nursery workers and assist in the selection of a community nursery manager. Managers are expected to work closely with the CCFI Community Committee.

**Workers:** Workers are either temporary or permanent. Temporary workers help during "peak" work periods and are not necessarily skilled workers. Permanent workers are trained specifically to work in the nursery throughout the year. In the September 1988 project start-up workshop and again in the annual review workshop, participants agreed that 50% of the nursery workers would be women.

### **Stages of the CCFI Model:**

In concept the CCFI model is dynamic, flexible, and subject to change throughout the life of the project. Three unique stages in the CCFI process can be identified:

1. infrastructure establishment,
2. training, and
3. development of self reliance.



**Stage One: Infrastructure Establishment:** The initial objective is to establish an infrastructure in which the project can effectively function. The main feature of stage one is the establishment of a tree nursery capable of producing a designated number of seedlings - a pre-determined production target. Although all the entities represented in the organizational diagram are in place, they may not necessarily be functioning simultaneously. Initially Peace Corps Volunteers are nursery managers; by the final phase of this stage, one nursery worker or community member will be appointed as the "nursery manager" or "nursery foreman" and the PCV will then serve as his/her counterpart.

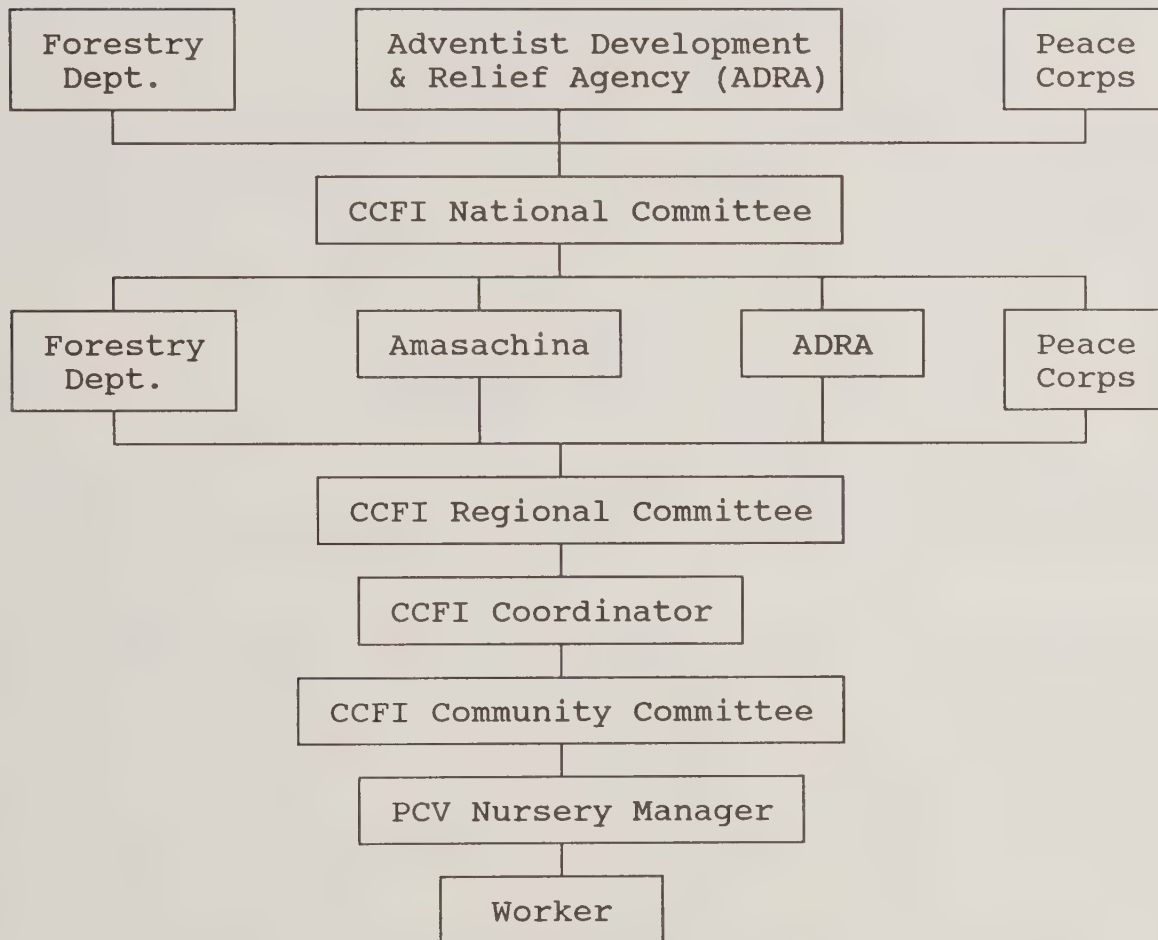
**Stage Two: Training:** During this stage training takes place at each level within the community. The CCFI Community Committee receives training in management and business techniques that will assist them in managing their own nursery. Workers get training in business and technical matters related to the activity in which they are involved. Managers get training on how to manage a nursery. Training could also be provided in such areas as bookkeeping, literacy, management of resources, extension, etc. Training can be specifically geared to develop a certain set of technical skills such as tree grafting or record keeping. In this stage the PCV continues as a counterpart to the nursery manager and gradually moves into an advisory role.

**Stage Three: Self Reliance:** The goal of the third and final stage of the project is to develop self reliance. Only minimal project inputs are anticipated in stage three and then only in the form of technical assistance. The main feature of stage three is that all the non-local participating organizations gradually withdraw support as each community becomes capable of operating and sustaining its own nursery enterprise. The CCFI Community Committee and the nursery manager will play a key role in overseeing the weaning of the nursery from outside support. At this stage the project might also be involved in several activities other than growing seedlings. Thus, the nursery manager might evolve into a "community project manager" who would be responsible for managing all the community's CCFI activities. A PCV might be involved as an advisor during this stage, but only at the beginning.



**Yurwelko - Young Community Woodlot of Teak with an Old Open-Grown Native Species.**

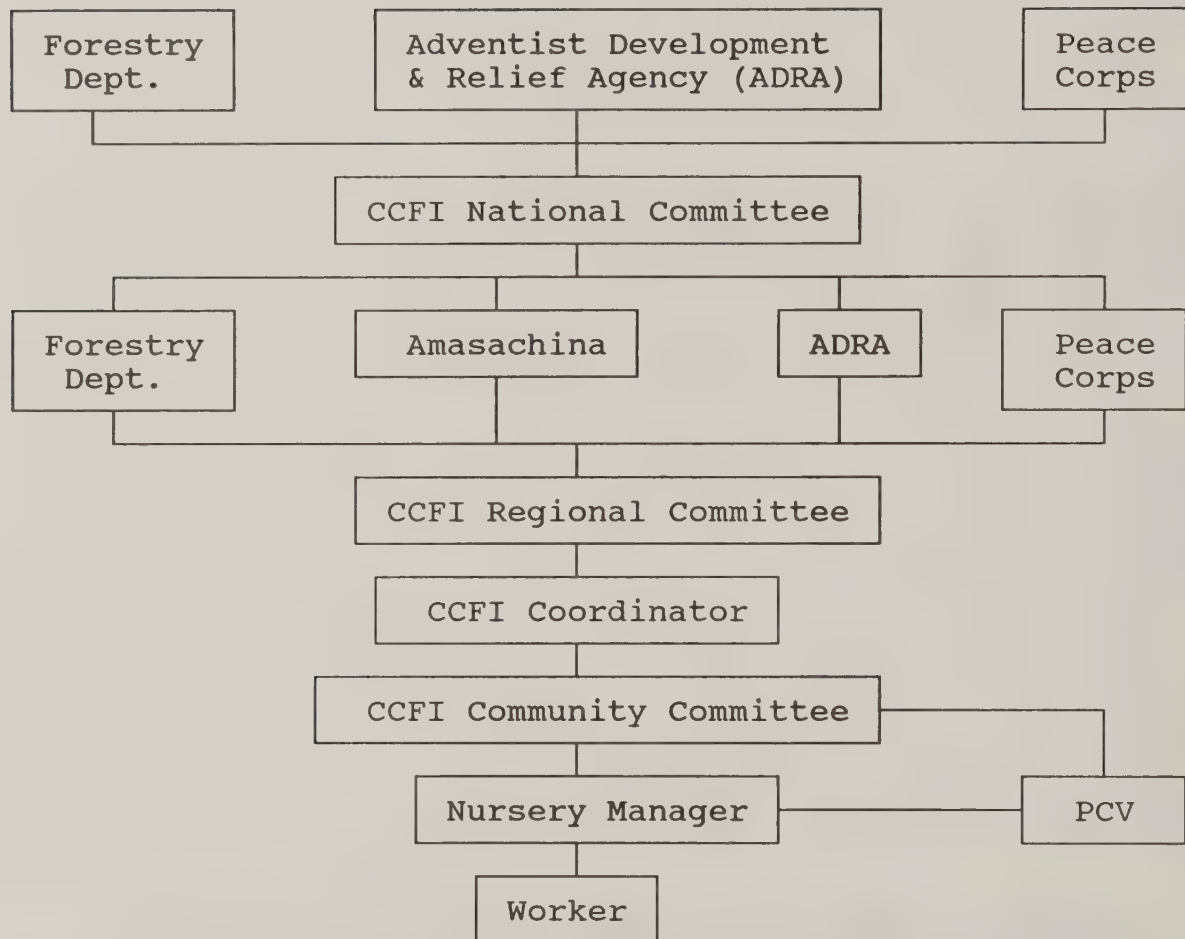
**STAGE ONE** a/



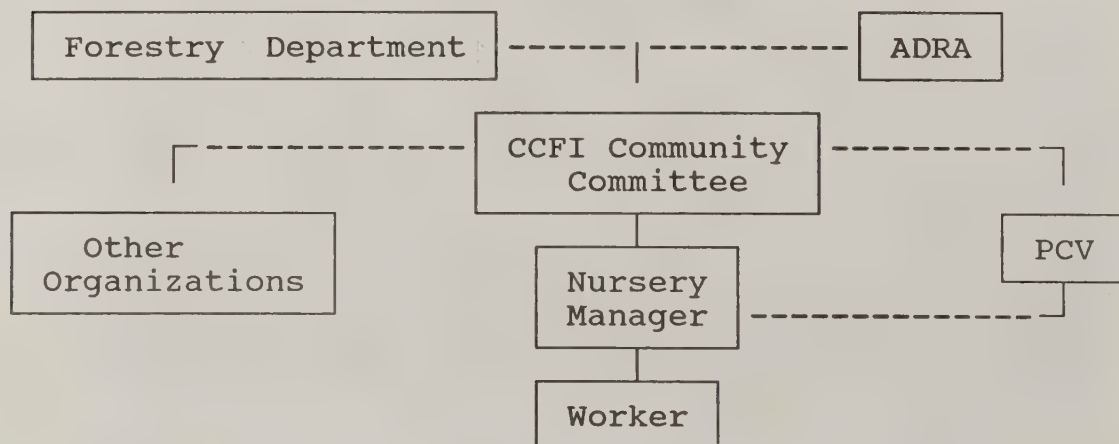
a/ For simplicity, the diagram shows only one site and only one worker per site. Currently there are 11 sites and at least ten workers per site.



**STAGE TWO a/**



**STAGE THREE a/**



## **PART II: OPERATIONS**

The operations part of this report covers the following sections: Project Management, Food Aid Management, Funding, Project Accomplishments, Lessons Learned, and Project Issues.

### **PROJECT MANAGEMENT**

When asked about CCFI project management, one Volunteer remarked, "If you had asked me that question in June, I would have had to answer 'really bad', but right now I would have to say it is 'great'." This was echoed in one fashion or another by all the Volunteers interviewed. The reference to inadequate project management in June relates to the months when ADRA/Accra did not disburse money to pay workers and the food aid was also delayed. (For comments on food aid, see the Food Aid Management section).

**Financial Management - Disbursement to Sites:** According to the Coordinator, the reason ADRA/Accra was not able to make any disbursements in June was because they were changing to a new financial system and all the ADRA/Ghana staff had to be trained in the new system's procedures before they could use it to disburse funds. As the Coordinator said, "before, once we spent the money and submitted the receipts, ADRA/Ghana used to send up the money through the banking system and it was deposited in the CCFI imprest account. However, it (the account) got depleted and was not replenished."

The Coordinator continued, "CCFI still has an imprest fund in the bank at Tamale, but they are now sending up the money on time through the banking system. We are getting bank accounts set up for each of the CCFI sites - I think we have all but two set up now - and we will send the money directly to each CCFI site's bank account through the banking system. The method could have some problems when there is nobody at the site to give out the money - when the PCV is absent from the site or when they are finishing up their service. This is probably something we should discuss in the annual review workshop."

Interrupting the disbursements of funds to the sites brought the project to the brink of disaster. The workers started to complain about not getting paid. At Tongo the workers lodged a complaint against the Volunteer for nonpayment of wages. In turn the community's Committee for Defense of the Revolution (CDR) "picked up and detained" the Volunteer for several hours of questioning. Some Volunteers managed to avoid serious problems only by using their personal money to pay the workers. Needless to say, the project lost considerable credibility during this period.

As a Volunteer said, "...right now I would have to say that it's (project management) 'great'". This Volunteer and all the others also expressed the opinion that they hoped that conditions would continue on as they had been during the last two months.

**Financial Management- Budgeting and Reporting:** Many of the people interviewed were unhappy with the way ADRA/Ghana was managing the CCFI finances and budget. The most



common complaint was, "nobody ever knows how much money has been spent and how much is left."

In all fairness the financial management of the project has not been an easy task. Funding has been erratic and came in "different packages" which apparently strained the ADRA/Ghana accounting system - a system which apparently was suffering from problems itself. The uncertainty of funding often necessitated "innovative" accounting measures to keep the project running financially. From the start it was very difficult to determine the amount actually budgeted, the amount that had been spent, and the amount of funds remaining that could be used for expansion. What is important is the fact that the collaborating entities did not have access to this information and for that reason were unable to make long-range informed decisions. Apparently the CCFI project is functioning as an ADRA/Ghana project with two outside advisors. Indeed, as the director of ADRA/Ghana said, "as far as we are concerned CCFI is just another ADRA/Ghana project and we treat it as an integral part of the ADRA/Ghana budget." Since the CCFI budget has been a part of ADRA's overall budget, there is a definite basis for this point of view.

ADRA/Ghana has recently gone through the process of implementing a new financial management system. As explained to the evaluation team, each department will now submit individual budgets, which will then be integrated into a single ADRA/Ghana budget. When the question was put forth, "why not have a separate CCFI budget?", the answer was simply that there was no need for a separate CCFI budget since the new system will provide all the needed information. The ADRA/Ghana budget is a multi-year operational plan (MYOP) and a "bridge MYOP" has recently been completed and submitted to USAID for approval. It has been stated that all the financial information for the CCFI project will be accessible from the new financial management system, there is no line item for CCFI. Rather it appears in the write-up of the MYOP under the heading of "agricultural projects" which include "CCFI" and gardening projects. The CCFI component is still a combination of the actual CCFI project and other forestry activities that ADRA is undertaking in other parts of Ghana. The Director of ADRA/Ghana commented, "It is a new system, give it a chance. It will give you all the information that you are requesting."

The Director also stated that the CCFI project drew funding from various accounts. He gave an example of CCFI getting funds for the renovation of water catchments from the ADRA "water projects" account. The new financial system should provide a level of monitoring to ensure that all CCFI expenses are covered from the CCFI account.

Last year the budget was prepared by the CCFI Coordinator and presented to the other collaborators during the CCFI annual review workshop. It was discussed and approved. From that point on, it is not clear how the budget was handled, but it appears that it was revised by ADRA without the knowledge of the other collaborators. For example, in discussing the availability of funds to renovate housing at the proposed new sites, the Director said that he did know if there was still money in the budget for housing since ADRA/Washington disapproved funding for house construction at the three proposed sites. He thought there might be some funds available, but he said he would have to check. If it were not available he thought that he might be able to take it from the budget for FY 92. This information apparently was not communicated to the other collaborators who were counting on using the money to begin renovation of the third site. As a result it appears that the budget which is approved at the

annual review workshop is just a guide. There indeed may be very valid reasons that necessitate changing the budget, but these changes should be communicated to the other collaborators at the time they are needed.

If this project is to remain a truly collaborative effort then all of the partners must be involved in overall project management decisions. Without accurate knowledge of the financial situation, effective project management decisions cannot be made.

**RECOMMENDATION NO. 1:** It is recommended that financial management incorporate the following:

- a. The CCFI project should have a separate budget, and expenses incurred that are related to the CCFI project should be charged against that budget. The CCFI budget should be reflected in the ADRA/Ghana budget as a separate line item.
- b. The budget presented to the CCFI collaborators at the annual review workshop should be the actual CCFI budget. Once the budget is approved, any subsequent changes should be communicated and approved by all the collaborating partners.
- c. To assist in wise project decision making, quarterly financial statements should be made available to all the collaborators.

**The CCFI Coordinator:** One of the key players in the CCFI project is the Coordinator who is responsible for ensuring that CCFI sites get needed money, supplies, and materials in a timely fashion. The Coordinator also prepares the budget which is presented at the annual review workshop. The Volunteers felt that the Coordinator had been doing a good job in trying to service all the sites. However, several Volunteers noted that the Coordinator is overworked and that if the project continues to expand he would be unable to continue to service all the sites adequately. Under current management conditions the Coordinator is overwhelmed with his workload, in spite of the fact that he works evenings and weekends. Any further expansion will require that the current CCFI sites receive less attention from the Coordinator.

Individual cost figures for each nursery could be used to guide decision making and provide insight into more efficient management of the CCFI sites. In theory this would be part of the Coordinator's job, but with his current work load it is not possible for him carry out the accounting needed to supply this information.

**RECOMMENDATION NO. 2:** It is recommended that an assistant for the Coordinator be hired to keep records and an accounting for the individual sites.

**Annual Review Workshops:** The annual review workshops have proved to be one of the most effective management tools used by the project. There have now been two annual review workshops - one in 1989 and the other in 1990. (A third workshop was held in November 1991.) In the two previous workshops, participants reviewed the previous year's accomplishments, discussed ideas and experiences, and made recommendations for improving project effectiveness. These workshops provided a forum for the review of the CCFI budget. Most people thought that these workshops were one of the most important strengths of the project, and were the element responsible for the high level of commitment demonstrated by all the collaborating entities and their staff. Visitors to these workshops have been surprised to see the heads of organizations working and discussing problems with community representatives. There has been



unanimous agreement that these workshops should remain as a regular and integral part of CCFI project management.

**RECOMMENDATION NO. 3: The annual review workshop should be continued.**

- a. The workshop should be timed so that it takes place immediately after the new Volunteers are sworn-in, thus allowing them the opportunity to attend.
- b. The workshop should be designed to review the goals of the CCFI project and the previous year's accomplishments with the majority of session time devoted to problem resolution.
- c. Funding for the workshop should be included in the CCFI annual budget.
- d. An experienced facilitator who does not have a direct relationship to the project should facilitate the workshop. Preferably this person would be Ghanaian.

**Amasachina:** Headquartered in Tamale this local non-governmental organization (NGO) has focused activities on rural development projects in the Northern Region. Representatives from Amasachina attended all of the project development workshops held in Ghana and took an active part in helping to develop the CCFI strategy. The responsibilities that Amasachina assumed in the CCFI project are:

1. To identify interested communities in which the CCFI project might function, and
2. To mobilize the men and women of those communities to implement the CCFI project.

In carrying out these tasks they were to liaise with the Regional Forestry Officer on matters dealing with nursery management and technical forestry questions.

Amasachina was very active during the initial stages of the project by helping to identify and organize communities. The function that they performed within the CCFI project was important. They provided the initial contacts with the communities and set the stage for the arrival of the Volunteers. Having Amasachina perform this function allowed the Volunteers to enter the community as a "nursery manager" rather than someone that controlled the CCFI project at the community level. Amasachina had some difficulties working in Upper East and West Region where they were not known, however they provided a valuable service to the CCFI project.

Amasachina is still part of the CCFI project, however its level of participation has dramatically decreased. This resulted from a Volunteer's allegations that Amasachina was charging the community for their visits and charging CCFI for more days of per diem than they actually merited. Amasachina denied these accusations, but the Amasachina representative most closely associated with the CCFI project decided not to assist with CCFI activities any longer. Thus, at this time there is little collaboration with Amasachina, although there is reference in one Volunteer's report that Amasachina has helped carry out extension work.

The accusations caused a serious "rift" between Amasachina and the other collaborating members of CCFI. Although there may be no way to repair the damage that has been done, there is still a need for an indigenous group to provide this service previously handled by Amasachina. The project should explore how relations with Amasachina might be restored, or explore having another group assume this role.

**CCFI Community Committees:** The CCFI Community Committee was to be established to promote and foster a sense of community ownership of the project. The Committee was also



designated to serve as a check and balance of power within the project - much like the board of directors of a corporation. To allow the Committees to react quickly and not become bogged down, it was recommended that the Committee be composed of three to five respected community leaders. To be most effective, this group was to be established during the initial phases of the community organizational process conducted by Peace Corps, ADRA, Amasachina, and the Forestry Department. With the help of these partners, and in particular Amasachina, the community was to appoint the CCFI Community Committee members who would work closely with the PCV upon his or her arrival in the community. However when Amasachina withdrew from the organizational process, the responsibility for Committee appointment was not assumed by any other collaborative partner.

Currently there are some sites that have no CCFI Community Committees; in the other sites the Committees range in size from one to eight. In some cases the Committee was appointed by the PCV upon arrival. In general, the Committees are not functional and have not really been integrated into the CCFI process. (In some instances CCFI Community Committee members have attended the annual review workshop, but this is not generally the case). Some of the Volunteers found the Committees so difficult that they have "fired" members and in some cases "abolished" the entire Committee. At other sites the Committees exist, but are non-functional or seldom meet.

Apparently considerable discontent developed with many of the CCFI Community Committee members because they thought that they should also receive compensation for the amount of time and effort they dedicated to the project. (In particular some of the members thought they should receive food aid).

In the 1990 annual project review workshop it was recommended that the "CCFI Community Committees should exist, but where they are not functioning they should be dissolved and a new one formed. There should be criteria in selecting voluntary Committee members..."<sup>8</sup> As an appropriate way to foster a sense of community ownership, incorporate a system of checks and balances, and instill a sense of pride in the project, the CCFI Community Committee still appears to be the most viable option for forming such a group.

**RECOMMENDATION NO. 4:** It is recommended that the CCFI Community Committees be reconstituted and that the committees be incorporated into the "CCFI process" in the following way:

- a. The Committees be reconstituted in a culturally accepted manner - one that conforms to the way that a particular village selects community members as representatives.
- b. At least one member of the CCFI Community Committee should attend the annual review workshop each year.
- c. The CCFI Community should receive training that would personally benefit the members and assist them in becoming better able to function as a CCFI advisory group.
- d. Thought should be given as to how the CCFI Community Committee members could receive compensation or other recognition for their efforts on behalf of the project.

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<sup>8</sup>Proceedings from the CCFI Annual Review Workshop "Tamale Reports"; CCFI Project; Accra, Ghana; October 23-26, 1990.

## FOOD AID MANAGEMENT

Throughout the project development process the use of the food aid to support natural resource projects was explored. During the drought years of 1983 and 1984, Northern Ghana was in dire need of food aid, and as a Peace Corps staff person said, "even now there is a great scarcity of food in the north." "Food aid was originally one of the key incentives for the communities to accept the project," he said, "and it is still the key as far as the workers are concerned." In the CCFI project as one ADRA official stated, "funds generated from food aid and food aid itself have supplied 90% of the resources used to support the CCFI project."

**Management:** Volunteers and workers consider the recent changes in food aid deliveries to be most welcome. "For the last two months food-aid deliveries have been very good," stated a PCV, "it has even been delivered right here to the site." Another Volunteer spoke of problems encountered prior to the recent changes.

"To pick up the food aid before, the workers had to go into Tamale. They would have to go to both the office and the warehouse and many times it was difficult to find both of the people working at the same time. Once the workers got the office approval to pick up the food, they had to go to the warehouse and get the food. Then after this they had to negotiate transport to get the food back to the village. It could be a difficult and frustrating process."



Chereponi - Preparing Teak Stumps for Planting.



A Volunteer in Upper East Region stated, "In April I would have said that the project management was bad because we ran short of rice for about 4 months. The workers stayed on the job, but it was difficult because it was the hunger time of the year and the workers were counting on getting the food." Food aid distribution from the warehouse in Bolgatanga seemed to be more difficult. As another PCV from the same region said, "Often there was nobody at the warehouse so somebody would have to stay over and try to pick up the food again the next day. Then the warehouseman would say, 'Come back tomorrow' which meant it would take even another day to get it out of the warehouse."

One Volunteer summed up the situation when he said, "I think things are going good now. ADRA has told us that CCFI will get the food aid first (first priority among ADRA food aid projects), and the trucks now deliver the food directly to the site. I just hope that it keeps up that way."

**Opinions on the Use of Food Aid in the Project:** Some Volunteers strongly support the use of food aid in the project; others are just as strongly opposed to it. One PCV taking the positive side noted, "Food aid is great for a place like this that is suffering from food shortages." Another PCV taking the negative side stated, "I hate food aid and the dependency that it creates, but the workers love it." When questioned which they liked best, food or money, most workers replied, "We like both the food and the money!" However, according to one worker they not only loved food aid, but considered it "better than money because if you have money you just have to go out and buy the food." One Volunteer noted, "What food aid has done is produce a vehicle to promote some responsibility because it is the workers themselves that manage the food aid." Most of the Volunteers feel that they do not play a role in food aid management; as one PCV stated, "The way I look at it, the food aid is ADRA's responsibility." However, some Volunteers have assisted the workers in the approval process, taking the food from the warehouse and arranging transport. Volunteers have usually been the ones in charge of keeping the records that designate who is eligible to receive the food aid.

**Monthly Food Ration:** The following is the monthly food ration given to each of the nursery workers:

- 1/3 bag of rice
- 1/2 bag of bulgur wheat
- 1 gallon of cooking oil

**Food Distribution on the Nursery Site:** At all the sites the workers divide up the food aid and there were no reports of inequitable distributions. As one of the Volunteers stated, "The workers themselves divide up the food and there is an equitable distribution of the food aid. Everyone is there when the food gets distributed so nobody gets cheated. I usually just stand there and watch."

**Food Aid Use:** In the majority of cases the recipients of the food aid use it, as one worker said, "because we have to eat!" A couple of Volunteers said that they know that some of the food is being sold, but this does not appear to be common. In one case, the PCV explained,

"The wheat and oil the people will sometimes sell, and use the money to buy locally grown millet which they prefer to the wheat. Actually, in making this exchange they get more food; thus, they can feed their family for a longer period



of time. When you come down to it it's just good economics and that's OK with me."

**Food Storage on CCFI Sites:** At many of the CCFI sites storage has been a problem. At Tizza the food aid is stored in a local store, at Chereponi it is stored in the Volunteer's house, and at some sites it is stored in the tool shed at the nurseries. This has been complicated by the fact that some of the sites get up to five months of food aid delivered in one shipment. (Most Volunteers like this as it ensures that they have a supply on hand and they won't "run out" as has happened in the past.) It is important that adequate on-site storage is available for the food-aid to prevent spoilage and theft which has occurred at some sites. Ideally there should be separate food aid storage facilities at the nursery sites, and those sites that still do not have tool sheds might plan a separate room for food storage. (Having a separate room will keep the food away from pesticides and chemicals that are often stored in the tool shed.) Storing the food at the Volunteer's house not only inconveniences the Volunteer, but can change the community's image of the Volunteer from that of a technical advisor to food distributor. There is no evidence that this has been a problem in the CCFI project, but it has caused considerable problems in other projects.



**Tolon - Inside a Tool Shed/Storage Room.**

## FUNDING

Funding for the CCFI project has been erratic. There has never been a single source of funding that covered the project over its proposed duration. There were several project proposals written that were submitted to donors.

**Planning and Design Phase:** The principal funds for the project development workshops came from USAID through the PASA with PC's Environment Sector in the Office of Training and Program Support. Obviously, for other organizations to allow their staff to attend these workshops involved In-Kind contributions. In those cases where three to four staff members of an organization attended all of the workshops, the In-Kind contributions were considerable.

**Implementation Phase:** USAID has been the principal source of funding for the project. Not only has USAID funded the planning and design phase of project development through the PASA with Peace Corps, but it also funded the implementation phase through grants to ADRA. This funding was obtained through the USAID/Washington office. The project also received \$21,000 from USAID/Ghana specifically for training. The project food aid distributed to the workers was also part of the USAID Title II program with ADRA. The collaborators made several attempts to get funding for the project through World Bank, both at the Washington and Accra levels. None of these efforts proved fruitful.

**Funding Summary:** The funding proposal submitted to the Government of Ghana for World Bank funding of the CCFI project stated that, "the funds used by the CCFI project to complete Phase I, the development and maintenance of eight nurseries, was \$350,226. USAID/Washington provided \$199,776 and the collaborating agencies contributed \$150,450 through In-Kind services." This budget was submitted for Phase II (1991-1994) for establishing twelve new nurseries and maintaining eight existing ones. The request further stated that, "The total budget for FY 1991-1994 is \$1,087,536." This included the requested funding of \$483,336 from the World Bank through the Government of Ghana and \$604,200 of In-Kind which would be provided by ADRA, Forestry Department, and Peace Corps. This proposal also pointed out that the communities themselves had made considerable In-Kind contributions to the project. ADRA is currently submitting a MYOP to USAID which includes funding for the CCFI project. (Although the evaluation team did see a copy of the text of the MYOP, they did not have the opportunity to obtain and study a copy of the budget).

## PROJECT ACCOMPLISHMENTS

The CCFI project not only accomplished its goal of broad-based participation, but has also been impressive in the area of seedling production and outplanting. In addition, the project initiated extension activities at all sites to the extent that specific extension materials for the CCFI project were developed (See Appendix 7). Seedling production at many of the sites exceeds demand. However, it should be pointed out that the first CCFI sites were only established in 1988, and most have only had one year of production activity and it will take more time until local demand and supply are in balance.

**Seedling Production:** The table on the following page provides the production figures for 1990 and 1991. Further details are provided in Appendix 5.



<b>CCFI Seedling Production By Site For 1990 and 1991 (a)</b>		
<b>Nursery Site</b>	<b>1990 Production</b>	<b>1991 Production</b>
<b>1988 Nurseries</b>		
Bongo	104,833	92,352
Chereponi	58,697	89,815
Salaga	12,310	39,451
<b>1989 Nurseries</b>		
Tolon	43,130	102,084
Libga	83,520	97,352
Tempane	22,140	22,541 <sup>(b)</sup>
<b>1990 Nurseries</b>		
Tongo	----	19,163
Tizza	----	35,732
Sankana	----	103,333
Zebella	----	67,020
<b>TOTALS</b>	<b>324,630</b>	<b>673,843</b>

(a) 1990 Production figures are for July; 1991 are for June.

(b) March figure.



**Yurwelko- Transplant Beds.**



**Chereponi - Mango Seedlings Under Leucaena.**



All of the nurseries produced a wide variety of tree species, some of which were native species. (See Appendix 5 for complete list of species produced by site.) Several nurseries produced more than twenty different species.

**Outplanting:** Every site successfully outplanted seedlings and experienced high survival rates, however, the planting configurations varied considerably from site to site. For example, Yurwelko had over 90% survival in a small "block" plantation of teak. Tolon had over 90% survival in plantations planted by community groups. Other sites had good survival rates and in some cases even as high as Yurwelko and Tolon. At most sites planting was undertaken by individual farmers as well as community groups.

Demand for species varied from site to site. The people of Zebella preferred neem, whereas in other sites demand for this species was low. As a general rule, teak was a highly regarded species due to its resistance to fire damage, low palatability for animals, and good market value for the poles. Fruit and nuts, especially mangos and cashews, have been in high demand and have been planted both by community groups and individuals.

**Extension:** Although each site has used different approaches, all the CCFI sites have been involved in extension. Libga, for example, gave extension presentations to forty communities. As a result of their extension efforts, sixty percent of the seedlings Libga distributed were planted by people who had attended an extension session. Tempene held a total of forty extension sessions. The first session, held under some mango trees, "kicked off" the extension program and was attended by 650 people who came to listen to speeches, hear music, and dance. The visual aids made for the CCFI project have proven very useful in introducing a wide variety of subjects. (These aids are found in Appendix 7.) Drama has been used in Bongo where it proved to be a good medium for mass extension. The Ghana Broadcasting Corporation (GBC) aired extension messages in the local language in Tizza and also provided television coverage in Zebella and Tempene. The Ghanaian Times ran articles on the CCFI project and on the individual sites at Salaga, Tizza, and Sankana.

## **LESSONS LEARNED**

There are many lessons learned from the CCFI project experience; some are obvious and others "surprising."

**Getting things done:** Some of the issues noted in the Project Issue section "have been around for a long time," as one person working with the CCFI project stated. In reviewing the proceedings of the annual review workshops it is noted that many issues were addressed and recommendations made. However, this does not mean that the issues were resolved. In a few cases the issue was "given" to someone to "come up with recommendations," but no further action was taken. The National Committee has to serve as a "watch dog" to see that the issues identified get addressed after discussion at the annual review workshops.

One example of this situation is the issue of "who owns the house" constructed on CCFI sites. Discussion, and indeed resolution, of the issue seemed to have taken place, but there is still some question on the "final" agreement. A July 1990 evaluation conducted by ADRA stated

concern about a Forestry Department desire to retain "ownership" of CCFI project houses.<sup>9</sup> This issue may be considered minor to the success of the CCFI project as a whole, however, it can be a major issue for a specific community. This is currently the case in Yurwelko where there is an empty CCFI house and nobody seems sure who owns it or who has the rights to use it.

The lesson learned here is that those issues that are addressed and not resolved generally resurface at a later date. In many instances the "resurfaced issue" is more complicated and difficult to resolve than the original issue. Resolving them as they arise would be more effective.

**Participatory Project Design:** Although this method of project design develops a strong commitment among the collaborating entities, it is actually more difficult to design a project using this method because:

1. Funding is needed to carry out the workshop process and donors are reluctant to fund workshops in which there is no guarantee that a viable project will actually result.
2. Participants often feel that there is no sense in designing a project without a guarantee of funding. Donors are reluctant to provide funding for an "unknown" project.
3. The process is criticized as being too long and time consuming.

**Funding:** Requests for funding should not be limited to just one donor. Project proposals should be submitted to several organizations even if funding looks almost certain from one. World Bank funding for the CCFI project was almost certain and no thought was given to submit the proposal to other potential donors. After more than two years of effort the World Bank funding did not materialize. Valuable time could have been saved by simultaneously presenting the project proposal to other donors.

**Goals and Objectives:** The goals and objectives of the CCFI project need to be reviewed at every annual review workshop. They should also form an important part of the PCV's pre-service training. Some of the PCVs who never attended an annual review workshop or discussed the goals and objectives in training thought that the only goal of the CCFI project was to establish a tree nursery. As one Volunteer stated to a member of the evaluation team,

"Really up until now I had only a vague idea of what the CCFI project was all about. Having you come out to visit and explain things really helped clarify a lot of things for me and I feel a lot more comfortable with the project now. I really did think that it just was a project to get a nursery established".

**Food-Aid:** In food-deficit areas, food-aid is well received by the people and in some cases, is even preferred over cash payments. One reason being that in these areas even a person with cash can have a very difficult time finding food that people are willing to sell. It is important to locate a project that uses food aid in an area where there is a distinct need for it.

**Housing for Nursery Manager:** Initially new housing was planned for the nursery manager. To construct the houses as planned required a substantially larger portion of the funding than was

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<sup>9</sup>End of Project Evaluation Report for Enhancement Grant PDC0701-G-SS-5127; ADRA; July 1990, page 98.



originally projected. This new construction also required a considerable amount of extra effort by the CCFI staff and the community members. Although most of the PCVs appreciate having "nice" housing, it really is not necessary to the success of the project. It is true that housing is scarce at the different sites, but for considerably less money and less effort adequate housing could be provided for the Volunteers. The lesson learned is that housing can be provided for PCVs working in the villages at less cost and effort by renovating existing housing.

**Negative Food-Aid Issues:** Among PCVs there is a certain amount of negative sentiment regarding food-aid because of the "hassle" it has caused them and also because of the "negative press" articles they have read on food-aid. As was previously mentioned one PCV did not like food aid because it created dependency. However, it might be difficult to create dependency with ten food rations which only provide ten families with food for about two-thirds of a month. Nevertheless, the attitude prevails and could create problems in the project. Training sessions that cover food aid issues should be included in the pre-service training.



**Bongo - Nursery Workers Transplanting Seedlings.**



## PROJECT ISSUES

The following issues were brought out during the evaluation of the CCFI project. As several people said, "Some of these issues have been around for a long time and need to get resolved." Many of these issues might be easy to resolve, but some will certainly be more complicated and will require considerable discussion before agreement can be reached on how they are to be handled. Without timely resolution of these issues it is doubtful that the CCFI communities will ever develop a profitable, self-sustaining community enterprise. These issues need to be resolved and can be through an established mechanism - the annual project review workshop.

**Sale of Forest Tree Seedlings:** There are two philosophically opposed positions on the issue of whether or not forest tree seedlings should be sold. One position is that if poor, small-scale farmers are charged for seedlings, they probably wouldn't buy them since they must use their limited funds to purchase the necessities of life - food, clothing etc. The other is that people should have to pay at least a minimal amount for seedlings as the trees will then have a "value" without which they are viewed as being "worthless". The Forestry Department has followed the policy of providing forest tree seedlings free of charge to whomever wants to plant them.

For the most part CCFI nurseries have followed the Forestry Department's policy. It is possible to continue to supply free seedlings as long as the funding continues to pay for production costs. However, the goal of the CCFI nurseries is to make money, become profitable, and in so doing, become self-sustaining. Once "outside" assistance is withdrawn it will be impossible for the nurseries to continue to provide free seedlings and remain profitable.

At this time the CCFI nurseries can decide to charge an amount equal to the cost of producing forest tree seedlings or more, but most people would not buy seedlings when they can get them free from the Forestry Department.

There are many ways of dealing with this issue, three of which were mentioned during the CCFI evaluation:

1. The Forestry Department could also sell forest tree seedlings. There is a cost attached to producing them and it is an expense that is currently born by the Forestry Department. In selling seedlings at or below the production cost the Forestry Department could recover part of these costs.
2. All parties could agree that seedling production be delegated to private enterprise (the CCFI nurseries). The government would no longer incur this expense and the Forestry Department could use their staff and nursery budget for more productive projects. As has proven to be the case in other countries, private nurseries could produce seedlings cheaper than a government forestry agency. Thus, in purchasing seedlings from a private producer the net cost to the Forestry Department for seedlings would be less.
3. Although in opposition to the tenets of Community Forestry, the CCFI nurseries could "elect" to grow no other trees than those which can be sold for a profit. If this were the case all forest seedlings would have to be obtained from Forestry Department nurseries, even if they were far from the villages that wanted to plant seedlings.

It is obvious that the Forestry Department will have to take an active role in the discussions related to this issue, as the outcome will have an impact on their policy related to seedling production and/or sale.

**Cash Generation:** One of the objectives of the CCFI project is to have the nurseries generate income. As of this evaluation, most of the CCFI nurseries have generated income from the sale of seedlings (primarily fruit trees). Zebella has generated the most income of all the sites because they sold their entire seedling production to a retired Japanese man who is setting up an agroforestry demonstration plot.

This issue was addressed at the 1990 annual review workshop which stated that the strategy for nursery self-sufficiency should be that "all the profits (be) recycled into the business."<sup>10</sup> Exactly how this would be done was not stated in the proceedings nor was it indicated if all or just a percentage of the profit was to be used in this manner. In the initial discussions on project planning this subject was discussed. At that time it was decided that a portion of the income would be used to "wean" the community from outside resources. In particular it would be used to pay a percentage of the cash paid to the workers. This percentage would gradually be increased until all of the workers' wages were paid from income generated from the project.

The remaining portion of the income would be used by the CCFI community organization to invest in other ventures. These might include activities that would supply needed community services, but would also be income generating. (Actual projects or services were to be determined by the community.) Regardless of the amount of money, the investment exercise would offer a "real" training experience in how to run a business.

The exact formula for determining when this process should be initiated was never established nor was it decided what percentages should be used. Right now the generated income is being used at some sites to provide benefits for the workers, e.g., loans for buying bicycles (see Appendix 10). This use of generated income might be beneficial to the project (and to the workers), but there should be a set of guidelines or criteria established for such purposes. Also, it should be done in a "business-like" manner that would help train the workers and others in business techniques and methods.

**Compensation for the CCFI Community Committee:** Through our interviews, it was determined that one of the major reasons why the CCFI Community Committees have not functioned as planned is that committee members feel that they "deserve" compensation. In particular they thought that they should receive food aid.

It is generally agreed that the committee members should "eventually" receive some sort of "compensation or reward" for serving on the committee. The issue confronting the CCFI project is one of timing and form of compensation.

**Appointment of Nursery Manager:** Originally the CCFI project planners anticipated that the Peace Corps Volunteers would serve as "temporary" nursery managers. The goal of the PCVs was "to work themselves out of a job" by training a competent local nursery worker who would

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<sup>10</sup>Proceedings from the CCFI Annual Review Workshop "Tamale Reports"; October 23-26, 1990.

assume the nursery manager position. Once the host country manager was selected, the PCVs would serve as advisors and identify ways that CCFI community operations could be strengthened through training and/or initiation of other activities. The selection of the nursery manager would be done with approval of the CCFI Community Committee and within a culturally acceptable context. A time frame was never determined for this process although it was anticipated that a host country nursery manager would be appointed by the end of the second year. However the time frame could vary depending on the person selected for training, and his/her basic knowledge of nurseries. As of the date of the evaluation there were no sites that had appointed a host country nursery manager, although some had a host country "nursery foreman".

If the CCFI project is to result in the establishment of a sustainable community nursery and organization, it is important that host country nursery managers be selected. Several PCVs have stated proudly that their workers "now know everything there is to know about running a nursery." This may be true, but the workers also need the experience of "being" the managers and taking on the responsibility of management decisions. Well before the PCV leaves, a community member should be identified to assume gradually the role while the Volunteer is still at the site and available to assist the host country nursery manager in making appropriate decisions. Having the PCV serve as an advisor also serves the purpose of establishing the credibility of the host country manager as the nursery "boss".

Another issue is when the nursery manager should be appointed and whether or not there should be an interim period when this person serves as a "nursery foreman" to establish credibility. Discussion should include how to ensure that this happens and when these events should take place.

**Training:** The whole issue of training is complex and relates to all of the other issues presented here. This is the most important issue currently facing the CCFI project because it directly affects the implementation of "Stage Two" in which training becomes the principle focus of the project. The training issue has three interrelated components which need to be addressed and resolved.

The first is to determine the kind of training needed to ensure that CCFI reaches its goal of assisting the community to establish a self sustaining enterprise. The training of the nursery workers in nursery management has taken place at most of the sites. In some cases this training has been "on-the-job" and in other cases it has been more formal, with the Volunteers, or others, serving as trainers. However, there is a need still for other types of training which would benefit the project and also the community itself. Among these are leadership training, bookkeeping, extension, and even basic literacy, which was mentioned by several nursery workers as training they would like to receive. Thus, the first step in addressing the training issue is to determine the kind of training that is needed and their priorities.

The next step is to determine who should receive the training. In the case of the CCFI project prospective trainees might be the community at large, the CCFI Community Committee members, the nursery workers, the Volunteers, the CCFI staff, or any combination of these groups. It is critical that the training be designed to meet the specific needs of each combination of groups receiving training.



The final step has two integral parts which at times are difficult to separate. Specifically, who can provide the training and who can fund it. There are currently many training resources available which include the collaborators themselves. There are also other organizations that specialize in giving certain types of short courses or seminars. They could also be approached to assist the CCFI project financially. USAID/Ghana has indicated that there are "local currencies" available that could be used to fund some of these training sessions. Funding for training could be obtained by combining the resources of different donors.

It is quite possible that the best way to approach the training issue is to discuss all of the components and see how they interrelate before a final decision is made on how the training program should be developed.

As some of the CCFI nursery sites are now entering Stage Two of the CCFI model, it is important that a CCFI training program be developed and individual training sessions be identified. Some of the training sessions that should be included in the CCFI training program include the following:

1. PCVs: Use the food-aid training module<sup>11</sup> in pre-service training (PST) that was specifically developed for presentation to Volunteers working in the CCFI project. (The module includes seven sessions that cover all the issues related to food aid and are designed to give the Volunteers a thorough understanding of these issues.)
2. PCVs: Use session seven of the food-aid training module<sup>12</sup> which was specifically designed to train the Volunteers in how to develop and implement a "mini-workshop" for the CCFI nursery workers. As far as can be determined, this session was not used in training the Volunteers, and no three-day nursery training courses were held for the nursery workers.
3. PCVs: In PST the Volunteers should get a thorough review of the CCFI project. This should allow for discussion of the goals and objectives of the project and what makes it different from other community forestry projects.
4. PCVs: There should be one or more specific sessions on how CCFI PCVs should function in a culturally appropriate manner. (The evaluation team was surprised to hear some Ghanaians state that PCV's actions were often culturally unacceptable to them).
5. Nursery workers: All the nursery workers, especially those at the new sites, should get a three-day training session on the technical aspects of nursery management. At some of the established nurseries the sessions could be geared more to record keeping and other more business-related topics. (As was pointed out by one of the community representatives in the project development workshop, it is important for the workers to be "officially" trained as it gives them credibility and "stature" in the community.)
6. Nursery workers: Consideration should be given to designing a training session specifically for the workers selected as the nursery manager. A three-day nursery

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<sup>11</sup>Joyce, Steven and Bruce Burwell, "Natural Resource Activities Supported with Project Food Aid: A Peace Corps Training Guide," OTAPS/ENV, July 1988.

<sup>12</sup>Session Seven - "Developing a Three-Day Nursery Training."

manager training session and a certificate will help the new manager establish credibility in the community. This session should be experiential and give the participants the opportunity to give some of the presentations. The Volunteers could act as facilitators.

7. Nursery managers and PCVs: Both the PCVs and the nursery managers - the counterparts - could take part in an in-service training on the specific aspects of nurseries, extension, and technical aspects of tree growing.
8. The Community CCFI Committee members: Training on the different aspects of business and how the Committee might function better to help the CCFI project be more effective.

There are many other types of training that should also be included in the overall CCFI training program (specifically training in community development and addressing community problems). These and the sessions listed above should be incorporated into an overall CCFI training plan.

**Communications & Dissemination of Information:** Many of the PCVs commented on the flow of information. As one Volunteer stated, "they require that we send in all this information in monthly reports, but we never get anything back". He continued, "they don't even answer letters that have specific questions". There needs to be communication between central management and the CCFI sites, but there also needs to be some form of communication between sites to share information - good ideas that might be used in all sites. Most volunteers felt that the National CCFI Committee had not communicated important decisions to the field. For a project to effectively function there must be a two way flow of information. One way to facilitate this process is to have the Coordinator compile pertinent information from the site reports and send it back to the field, but the Coordinator has little time available to dedicate to such a project. A newsletter would also serve this purpose but would also be labor intensive. (The newsletter idea has considerable merit. There have been cases where a newsletter has evolved into a national forestry publication with considerable prestige). Regardless of the format chosen, it is important to develop a communications system to allow the sites access to have access to information.

The CCFI communication system can serve as a mechanism for conveying operational decisions and policy to the field. In some cases policy decisions have been made and are not communicated to field staff. Thought might be given to documenting CCFI procedures, guidelines and policy, thus providing a reference to field staff. This could take the form of a CCFI operational manual or some similar document. The CCFI project will continue to function for at least another six years, and as "people come and go", there will be a need to have this type of information.

**Budget:** Up until now there are few people involved in the preparation of the budget. It has primarily been the responsibility of the Coordinator and the ADRA/Ghana staff. To facilitate a better understanding of the budget and also have a "tighter" presentation it might be useful to have several people appointed to review the budget prior to the annual review workshop. To get different perspectives the "appointees" could be from different agencies. This would alleviate the workload of the Coordinator.



**Traditional versus Pilot Approach:** Two approaches to compensation criteria have been identified during the course of the CCFI project. The traditional approach allows the nursery workers to be paid on a monthly basis. The pilot approach has them paid on a production basis. (For more details on the differences, see Appendix 11). The pilot approach was proposed in the first annual review workshop and the participants agreed to "try it out" at a few nursery sites. Initially the idea of producing seedlings on a production basis was very popular with the workers as it allowed them the chance to work whenever they wanted and at whatever rate they considered best. It was also determined that the "production" approach would offer more people the chance to work in the nursery. However, during the evaluation some negative aspects of the pilot approach surfaced. The workers tend to be interested only in working on growing "their seedlings" and not interested in performing other communal work required in a community nursery. The "pilot" nurseries are noticeably more disorganized and "dirtier" than the "traditional" nurseries. (At one site there were broken plastic bags and "rejected" seedlings lying around in piles throughout the nursery). Another negative aspect is the lack of interest among the workers in extension. When the workers at Tizza were asked how the project can work better they replied, "We need to do more extension, but it (extension) takes most of our time; we need the time to grow our seedlings." It should be noted that on the positive side the "production" nurseries have generally produced more seedlings. However, one Volunteer using the "traditional" approach was skeptical and commented on a nearby "pilot" nursery, "they work with the pilot approach, and have been working longer than we have; they do little extension and although they produce more seedlings, about 90 % of them will just end up as compost."

This discussion is germane to how well these two systems perform in relation to producing seedlings and promoting tree planting. Choice of approach is dictated by other factors, such as, its impact on developing a stable work force and on establishing a sustainable nursery project. How the nursery workers like the approach is another point to consider. When the workers at a "production" nursery were asked "which method do you like best", the workers said, "We prefer getting paid monthly". Another worker stated, "but seedling production would be the same as it is now". To explain why one worker added, "My bicycle broke yesterday when I was delivering trees and I can't fix it. If I was getting paid monthly I would have the money to get it fixed".

For "pilot" sites to change to the traditional approach could also be difficult because most of the pilot nurseries have a larger number of workers - almost double the number in the traditional nurseries. To make the change the number of workers would have to be decreased to ten. This would mean that seven to ten workers would have to be dismissed.

The CCFI project should address this issue to determine which of the two approaches is the best from all perspectives. Each site may have to be carefully evaluated to see which approach might be best at that given site. As one Volunteer said, "each site, each PCV and each nursery worker is very different in practically every way, thus, we should look at the approach carefully".

**Species of Seedlings Produced:** The communities at each site have different preferences when it comes to tree species. Some communities are interested in planting neem, others have little interest in this species, but prefer teak. Nursery production should be geared more to the demand and those species that have little acceptance in the community should not be produced. (There are still some nurseries that are producing large quantities of leucaena where there is little community interest in the species; in one such case there is a nearby Department of Agriculture nursery that has a large production of leucaena seedlings).



A large number of tree species have been produced in the CCFI nurseries. It might be "nice" to produce a wide variety of species, however, if there is no interest in planting these species, it is just wasted effort. Planting locally unknown species might well be justified as a means of testing their suitability, but if the community has no interest in the species, there is little reason to plant them. Also, the "testing" of species that are not appropriate for the local site conditions should not be undertaken, as it could lower the credibility of the nursery. (An example being the cacao seedlings near Tamale which does not have a climate appropriate for the successful production of cacao). The community should have a voice in the selection of species that are being produced for them to plant; however, they will need some guidance in making appropriate species selection.

The Environmental Protection Council stated that they thought that the CCFI project was focussing on tree species (neem and teak) that were not nitrogen-fixing species and, therefore, not species that should be promoted in Northern Ghana. If rehabilitation of degraded agricultural land were the sole goal this criticism would be justified. For production of poles, however, the species currently being planted are more appropriate. At those sites where there is a need to rehabilitate the land and also produce poles the mixing of nitrogen-fixing and "pole production" species could be considered.

CCFI should develop some guidelines that would promote a rational and community responsive approach to species selection and at the same time take into account the individual characteristics of each site.

**Future Site Selection:** Future site selection is an ongoing issue at each annual review workshop. A set of criteria was developed for selecting new sites which is not being followed<sup>13</sup>. This criteria should be reviewed and discussed at the annual review workshop and any changes that are deemed necessary should be incorporated.

One of the aspects of the original site selection criteria was that the sites should be located in environmentally degraded areas. It appears that there has been little consideration of this aspect of the criteria as far as designating new sites in the Upper West Region. In this region there is little environmental degradation and the people do not have much interest in tree planting. Locating CCFI sites in the Upper West Region has also made project logistics much more difficult to manage. Due to the apparent low-level need for CCFI's assistance in the Upper West Region, serious consideration should be given to limiting expansion of the project in that region. It would seem more logical to concentrate the new sites in the Eastern part of Northern Region and Upper East Region where greater need has been identified and the logistics will be easier to manage.

The Coordinator's workload is directly related to the expansion and selection of new sites. The Coordinator's workload is such that he currently has difficulty servicing existing sites. With the aid of an assistant the Coordinator would have sufficient time to deal with the work necessary to establish new CCFI sites.

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<sup>13</sup>"Criteria for Community Selection"; Appendix 10 in the Proceedings from the workshop in December, 1987; Accra, Ghana.

Although this was discussed and some agreement reached in a previous workshop, the issue of who decides which communities will be new CCFI sites and who does the actual site preparation has never been completely resolved. With the minor role that Amasachina has recently assumed, careful preparation and organization of the community is not being carried out.

There is still much to review, discuss and revise concerning the site selection process. The National CCFI Committee needs to review some of the agreements made in previous workshops and set a policy concerning this issue.

**RECOMMENDATION NO. 5: It is recommended that the above mentioned issues be addressed as soon as possible. Resolution of these issues would greatly improve CCFI's operations and effectiveness.**

### IN SUMMARY

The evaluation team feels that the most impressive element of the CCFI project is the commitment and dedication demonstrated by the participating groups, communities and individuals associated with the project.

Although only in its third year, the project has established 11 community nurseries which produced almost 700,000 seedlings in 1990 - a very impressive accomplishment. Those seedlings most recently outplanted have had a high rate of survival and their protection will be critical as they are many years from maturity. As the project has both production and capacity goals the nurseries and seedling production are only the first steps.

Problems and "glitches" in the project management require changes and a wide variety of issues need to be resolved. However, the CCFI project is not unique in its logistical makeup. Using the process of the annual review workshop the project successfully addresses and resolves problems and with continued commitment of project staff, CCFI will have an even greater impact in the future.



**Libga - Interplanting Teak with Guinea Corn and Groundnuts.**



## REFERENCES

Adventist Development and Relief Agency International. July, 1991. "ADRA/Ghana Extension of FY 1989-FY1991 MYOP - Bridge Document from 1989-91 MYOP to 1992-95 MYOP". Silver Spring, Maryland.

Benchmarks, Inc. October, 1988. "Talking Points: Meeting Between Loret M. Ruppe and Barber Conable". Washington, D.C.

Benchmarks, Inc. 1990. "Assessment of the Peace Corps/U.S. Agency for International Development PASA in Forest Resource Management". Washington, D.C.

Burwell, Bruce. January, 1988. "Proposal for Collaborative Community Forestry Initiative (Revised)". Peace Corps, Washington, D.C.

Burwell, Bruce and Joyce, Steven. July, 1988. "Natural Resources Supported With Food Aid: Training Guide". Peace Corps. Washington, D.C.

Collaborative Community Forestry Initiative. October, 1990. "Annual Review Workshop: The Proceedings". Tamale and Accra, Ghana.

Joyce, Steven and Burwell, Bruce. 1985. Community-level Forestry Development: Options and Guidelines for Collaboration in PL 480 Programs. Peace Corps Office of Training and Program Support and U.S. Agency for International Development Bureau for Science and Technology. Washington, D.C. pp 235.

McFarland, Steve. June, 1988. "Collaborative Community Forestry Initiative: Six Month Report". Peace Corps. Accra, Ghana.

Management Systems. December, 1988. "Evaluation of Peace Corps/U.S. Agency for International Development Cooperation in Africa". Washington, D.C.

Norton, Andrew. ND. "Social and Economic Context for Community Forestry in Northern Ghana".

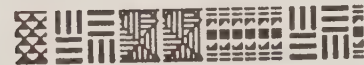
Peace Corps. November, 1988. "Collaborative Community Forestry Initiative (Ghana): Notes of Meetings Held at the World Bank". Washington, D.C.

Peace Corps and U.S. Agency for International Development. 1987. Food Aid and Natural Resources Programming Workshop, Mombasa, Kenya, The Proceedings. Washington, D.C. pp 154.

### **PART III: CCFI NATIONAL COMMITTEE RESPONSE TO EVALUATION**

Following is a four page memorandum from the CCFI National Committee. It was drafted after they reviewed the draft CCFI evaluation report.

# United States Peace Corps Ghana



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## MEMORANDUM

DATE : February 21, 1992

TO : Bruce Burwell, Env/OTAPS  
Bill Helin, Forestry Support Program/USAID  
Jennet Robinson, AID/PVO/OTAPS

FROM : John Goldrick, PCD/Ghana *Goldrick*  
John Francois, Chief Conservator, Forestry Dept. *John Francois*  
Israel Agboka, Director, ADRA *Israel Agboka*

SUBJECT : Evaluation of CCFI Project (Draft)

As requested, we have reviewed the CCFI Evaluation draft submitted on January 23, 1992. Our review involved individual perusal as well as National CCFI Committee discussion; we also asked Steve McFarland, APCD/Rural Development and Abigail Abandoh-Sam, Assistant Director/ADRA, to read and comment on the draft.

All of us felt that the report is thorough and insightful. Indeed, the report evidenced not only an in-depth knowledge of the origins and development of the CCFI concept, but also a perceptive and up-to-date understanding of each CCFI site. We applaud your work and we believe your report captures the heart of the collaborative initiative and its implementation process, as well as offers meaningful and attainable recommendations which will increase CCFI's impact and effectiveness.

We are enclosing a copy of one of the drafts you sent us. This one contains comments and notes with a few suggestions/corrections which you might wish to incorporate into your final report. Additionally, the National CCFI Committee (with Steve McFarland and Abigail Abandoh-Sam) collectively reviewed the Evaluation Team's Recommendations. We wish to share with you our responses to each of those recommendations:

**RECOMMENDATION NO.1:** It is recommended that CCFI financial management incorporate the following:

- a. The project should have a separate budget against which all related expenses are charged. The CCFI budget should be reflected in the ADRA/Ghana budget as a separate line item.
- b. The budget presented to the CCFI collaborators at the annual review workshop should be the actual CCFI budget. Once the budget is approved, any subsequent changes should be communicated and approved by all the collaborating partners.
- c. To assist in wise project decision making, a quarterly financial statement should be made available to all collaborators.



## RESPONSES:

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- a. ADRA/Ghana has already worked toward redesigning its budget system to allow separate CCFI accounting. Steps towards a separate budget were first taken, shortly after departure of evaluation team, weeks before annual review workshop.
- b. The CCFI National Committee met prior to the start of the annual review workshop to discuss FY92 budget realities and projections as well as FY'93 preliminary projections. Since that meeting/discussion, several follow-up (open and frank) budget discussions have occurred. It appears that this recommendation is being followed at this time.
- c. ADRA/Ghana has committed itself to meet this recommendation. Other collaborators on the National CCFI Committee will continue to press for this recommendation to be followed.

**RECOMMENDATION NO.2:** It is recommended that an assistant to the Coordinator be hired to keep records and establish an accounting system that would track the expenses of each site.

**RESPONSE:** We looked at this recommendation as identifying two separate issues. First, it is apparent (and recommended by parties attending the November, 1991 annual review workshop) that the CCFI Coordinator's responsibilities are so extensive as to necessitate an assistant being assigned to him. The ADRA administration has indicated that for FY92 it is only capable of assigning an assistant to the Coordinator, on a part-time basis. Full time assistant is a line item consideration for the FY93 CCFI budget.

The second issue we identified focused on the part of the recommendation suggesting an assistant to the Coordinator whose specific responsibilities would be record keeping and the establishment of an accounting system that would track the expenses of each CCFI nursery site. The National Committee received the recommendation approvingly and Peace Corps offered to look into the feasibility of assigning a Small Enterprise Development Volunteer to work with the Tamale ADRA staff to establish such a record keeping and accounting system, as well as assist PCV Nursery managers in the identification, design and monitoring of income generating activities.

**RECOMMENDATION NO.3:** The annual review workshop should be continued and incorporate the following components:

- a. The workshop should be timed to take place immediately after the Volunteers are sworn-in annually so they may also attend.
- b. The workshop should be designed to review the goals of the CCFI project and the previous year's accomplishments with the majority of session time devoted to problem solving.
- c. Funding for the workshop should be included in the CCFI annual budget.
- d. An experienced facilitator who does not have a direct relationship to the project should facilitate the workshop. Preferably this person would be Ghanaian.

**RESPONSE:** This recommendation was well-received by the National Committee. The unanimous approval as regards this recommendation came after it was understood as follows:

- a. The workshop will be scheduled to take place soon after Volunteers are sworn-in so they may also attend. The National Committee agreed that October - November might be best, thus, giving new Volunteers time to refresh themselves after 10 weeks of Pre-Service Training sessions, and allowing them approximately 2-3 months to familiarize themselves with their sites and their communities. PC/Ghana's PST/CCFI policy and procedure component will be reviewed and strengthened to provide new PCVs with the focus/foundation needed for first 2-3 months of service.
- b. As was done for the 1991 annual review workshop, future workshops will continue to be designed to review the goals of the CCFI project and the previous year's accomplishment with the majority of session time devoted to problem solving.
- c. Funding for the workshop will be included in the CCFI annual budget.
- d. An experienced facilitator will be sought to facilitate the workshop whether or not that person has a direct relationship to the project will depend on availability and credentials. The National Committee agrees that "preferably this person will be Ghanaian", but believes it even more important that the facilitator have reasonable knowledge and understanding of reforestation/aforestation in Ghana.

**RECOMMENDATION NO.4:** It is recommended that the CCFI Community Committees be reestablished and incorporated into the "CCFI process" in the following way:

- a. The Committees should be reestablished in a culturally acceptable manner, one conforming to the way the particular village selects community members as representatives.
- b. At least one member of the CCFI Community Committee should attend the annual review workshop.
- c. The CCFI Community should receive training that will personally benefit the members and assist them in becoming better able to function as a CCFI advisory group.
- d. Thought should be given as to how the CCFI Community Committee members could receive compensation of other recognition for their efforts on behalf of the project.

**RESPONSE:** The National Committee agrees that reestablishment of the Community Committees is a priority for CCFI. This concern captured much time during the most recent annual workshop.

- a. Nursery managers have been charged with the task of reestablishing and incorporating Community Committees into the "CCFI process" during FY'92. Roles and responsibilities of community committees as well as selection criteria were established at the '91 Annual Review Workshop.
- b. This past workshop did include Community Committee representatives from those sites which still had a viable committee. Once each site has an established and working Community Committee, representatives from each community will be included in the workshop.



- c & d. The issue of training for the Community Committee members and the feasibility of compensation for Community Committee participation are complex issues which the National Committee has agreed to take under advisement. In consultation with other working members of the "CCFI project", the National Committee will continue to search for resolutions for those issues during the present year with the possibility of bringing them for full discussion at the 1992 annual workshop.

**RECOMMENDATION NO.5:** It is recommended that the following issues be addressed as soon as possible. Resolution of these issues will greatly improve CCFI operations and effectiveness. These issues are:

- a. Training
- b. Sale of forest tree seedlings
- c. Cash Generation
- d. Compensation for the CCFI Community Committees
- e. Appointment of nursery manager
- f. Communication & dissemination of information
- g. Budget preparation
- h. Traditional versus pilot approach
- i. Species of seedlings produced
- j. Future site selection

Since the project is moving into the "training" stage of activities, training is considered the most important issue to address and resolve.

**RESPONSE:** The National Committee agrees unanimously that resolution of the issues listed in Recommendation No.5 will greatly improve CCFI operations and effectiveness. Each of these issues was addressed at the Fourth Annual CCFI Review Workshop held in Tamale, November 11-15, 1991. The discussions leading to suggested resolutions were lively and productive. Tasks have been assigned to individual collaborators to insure issue resolution in many of the areas.

Note:

We are enclosing with this memorandum a copy of the 1991 Workshop Report as well as a Cross Reference of Annual Review Workshop Recommendations which arranges tasks by category and according to the individual or agency collaborators who will be responsible for carrying out those approved recommendations. In many cases, the recommendations require action on the part of multiple collaborators. The National Committee will monitor the implementation of the approved recommendations.



**COLLABORATIVE COMMUNITY FORESTRY INITIATIVE**

**APPENDIXES**

1. THE EVALUATION INSTRUMENT
2. PEOPLE INTERVIEWED
3. EVALUATION TEAM'S DEBRIEFING IN GHANA
4. SITE DESCRIPTIONS
5. NUMBERS AND TYPES OF SEEDLINGS PRODUCED
6. INNOVATIVE IDEAS AND WAYS SOME SITES  
HAVE OPERATED
7. CCFI EXTENSION PROCEDURES PACKET
8. STRATEGY FOR SELF-SUFFICIENCY
9. NURSERY WORKER'S COMPENSATION STRATEGY
10. CRITERIA FOR COMMUNITY SELECTION
11. QUESTIONNAIRE FOR SECOND YEAR VOLUNTEERS

## **APPENDIX 1**

### **THE EVALUATION INSTRUMENT**

This questionnaire was used by the evaluation team when interviewing persons involved in the CCFI process. Depending on their level of involvement, not all questions were necessarily asked of each individual.

## EVALUATION FORM FOR EVALUATING THE CCFI PROJECT

### A. Project Origin:

1. What was the origin of the project?
2. What role did your organization play in the origin of the project?
3. What role did USAID play?
4. What role did PC play?
5. What other organizations played key roles? What were these roles?

### B. Project Development:

1. What is the problem the project is trying to address?
2. What are the goals of the CCFI project? [What is the project trying to do?]
3. Who determined the problem and the goals, and how were they decided? Are they realistic?
4. How was the project developed and designed?
5. How was the budget for the project determined? By whom?
6. How were the organizations assigned their roles? How were they agreed upon? Was this effective?
7. What do you think of the way this project was "put together"? Should other projects be developed and designed in this way?

### C. Project Management:

1. Who manages the project?
2. Are they doing a good job?
3. If you have a problem, who do you see? Does the problem get resolved?

### D. Funding:

1. What had been the sources of funding for the project?
2. What attempts to get funding have proved fruitful, why?
3. What attempts have failed, why?
4. What might project staff do to insure future funding; who should do it?
5. How much funding would CCFI need per year?

### E. Food Aid:

1. Did food aid assist the project, how?
2. Was the food aid well received by the communities?
  - (a) Type of ration (commodities)
  - (b) Was the distribution equitable, timely?
  - (c) How was the food aid used?
  - (d) Who got the food aid; how many people?
  - (e) How long was it given?
  - (f) Why did it stop?



3. How was the food aid managed?
  - (a) By whom?
  - (b) Did they do a good job managing it?
4. Did food aid play an important part in helping to establish the project? What part?
5. Were there problems with the food aid; how were they resolved?

**F. Project Monitoring & Evaluation:**

1. How was the project monitored, and by whom? [Who got the information?]
2. Has the information gained in monitoring led to any changes in the design of the project? If so, how?
3. Is there a better way to monitor the project? How?

**G. Project Accomplishment:**

1. What has the project done in the forestry sense?
  - (a) How many nurseries have been established?
  - (b) Seedlings grown:
    - (1) How many seedlings have been grown?
    - (2) What species?
    - (3) What problems were encountered?
  - (c) Seedlings planted:
    - (1) Why did you plant the trees?
    - (2) How many seedlings did the community plant and where?
    - (3) Survival rates.
    - (4) Problems encountered?
  - (d) How many seedlings were sold?
    - (1) To whom?
    - (2) At what price?
2. Training:
  - (a) Was any training of community members done?
  - (b) What type of training?
  - (c) Who attended the training sessions?
  - (d) How many people were trained?
3. What "other" things has the project done?
  - (a) Are there any other activities that were started through the CCFI project?
  - (b) What is planned?

**H. Collaboration:**

1. How important has collaboration between organizations been to this project?
2. What factors promoted collaboration between organizations working on the CCFI project?
3. What was the "thing" that fostered the level of collaboration that resulted with the CCFI project?

4. What role did USAID play in collaboration?
5. What role did PC play in collaboration?

**I. Satisfaction:**

1. How satisfied are you with project? [Are you proud of having worked on the project?]
2. Would you be willing to "do it all over again"?
3. How could a higher level of satisfaction/success be attained?
4. How have you benefitted from this project?

**J. Problem Resolution:**

1. Have there been disagreements on the project? [How things are run?]
2. How were disagreements resolved?
3. How well has this method worked?
4. Do you think there could have been a better way?

**K. Sustainability/Replicability:**

1. What is the future of the project? Where is it going; when should it end?
2. Could this project be replicated to other parts of the country?
3. In what way could this project be sustained? What would be needed?
4. Are incentives used in this project? What are they? How are they used?

**L. Lessons Learned:**

1. From your experience on the CCFI project, what are the important lessons learned?
2. Which of these is the one most important thing that you have learned?
3. If a similar project was being initiated, what "words of wisdom" could you offer the people developing the project. [What would be the best advice you could offer to those that are developing a project similar to the CCFI project?]

## APPENDIX 1

### THE EVALUATION INSTRUMENT

This questionnaire was used by the evaluation team when interviewing persons involved in the CCFI process. Depending on their level of involvement, not all questions were necessarily asked of each individual.

## APPENDIX 2

### PEOPLE INTERVIEWED



## PEOPLE INTERVIEWED

### ADVENTIST DEVELOPMENT AND RELIEF AGENCY

#### Washington

Mr. David Taylor

#### Accra and Tamale

Mr. Israel Agboka

Mr. Godfrey Ntim

Ms. Abigail Abandoh

Mr. Sammy Antwi

### AMASACHINA

Fusini Iddrissu

### GHANAIAN FORESTRY DEPARTMENT

Mr. John Francois

Mr. Adam Abu

Mr. W.B. Ire

### U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

#### Accra

Mr. Ed Birgils

Mr. Peter Wiesel

Mr. Emmanuel Atieku

#### Washington

Mr. Dan Deely

Mr. Joe Langlois

### U.S. PEACE CORPS

#### Staff

Mr. John Goldrick

Mr. Steve McFarland

Mr. Ben Baah

#### Volunteers

Mr. David Banks

Mr. Joshua Bunker

Mr. Larry Lutz

Mr. Brian Mumma

Ms. Jamie McGowan

Ms. Tracy Roberts

Ms. Amy Schrock

Ms. Leigh Ann Spence

### COMMUNITY PARTICIPANTS (By Site)

Bongo - Mr. Issah Asurduna

Libga - Mr. Zacheria "Zack" Abukari

Sankana - Rev. Pastor Bagonlur

Tolon - Mr. Al-Hassame "Bob" Sahfu

Tongo - Two nursery workers, whose names were not recorded

Yurwelko - Rev. Jacob and Mr. Samuel Atotura

### OTHER PEOPLE WHO HAVE BEEN INVOLVED WITH CCFI

Mr. Ed Butler - Former PC/Ghana Director

Mr. James Lassiter - Former PC/Ghana Director

Mr. Steven Joyce - Consultant

Ms. Virginia Wolfe - Former PTO/Ghana

### **APPENDIX 3**

#### **EVALUATION TEAM'S DE-BRIEFING IN GHANA**

This appendix is an outline of topics and issues presented in the de-briefing session held for the National CCFI Committee in Accra, Ghana on August 29, 1991 at 9:00 AM.

### APPENDIX 3

#### EVALUATION TEAM'S DE-BRIEFING IN GHANA

The following is an outline of topics and issues presented in the de-briefing session held for the National CCFI Committee in Accra, Ghana on August 29, 1991 at 9:00 AM:

##### OVERVIEW:

- \* How is the CCFI project "going" at this point in time?

##### PROJECT MANAGEMENT:

- \* Food Aid
- \* Money
- \* Materials/Supplies
- \* Coordinator Workload
- \* Requests for Assistance

##### COLLABORATION:

- \* United States Agency for International Development (USAID)
- \* Adventist Development & Relief Agency (ADRA)
- \* Forestry Department
- \* Peace Corps (PC/Ghana; PC/Washington; the PASA)
- \* Environmental Protection Council
- \* Amasachina (Local Non-government Organization)
- \* Other Organizations: Department of Agriculture, Action Aid, etc.

##### COMMUNICATIONS:

- \* A Two-Way System (Newsletter?)
- \* Reports (Standardization):
  - Format?
  - How often?
- \* Responses for Questions from the Field
- \* Meetings:
  - How Often?
  - Where?
  - Who Conducts Them?

##### SUSTAINABILITY:

- \* Income Generation
- \* Training:
  - For Peace Corps Volunteers
  - For Counterparts
  - For Community
- \* Leadership
- \* CCFI Community Committee
- \* Business
- \* Extension



## ISSUES FOR CONSIDERATION:

- \* Selling All Trees
- \* What to do with the Cash Generated
- \* When to Appoint Nursery Manager
- \* Training:
  - When?
  - What Kind?
  - Who Conducts the Training?
  - Who Attends the Training?
- \* How to Present Ideas
- \* Budget
- \* Pilot versus Traditional Approach to Seeding Production
- \* Seedling Species Produced
- \* Future Site Selection
  - Where?
  - Who Does it?
  - Criteria for Site Selection?

## SUMMARY

## QUESTIONS & ANSWERS

## APPENDIX 4

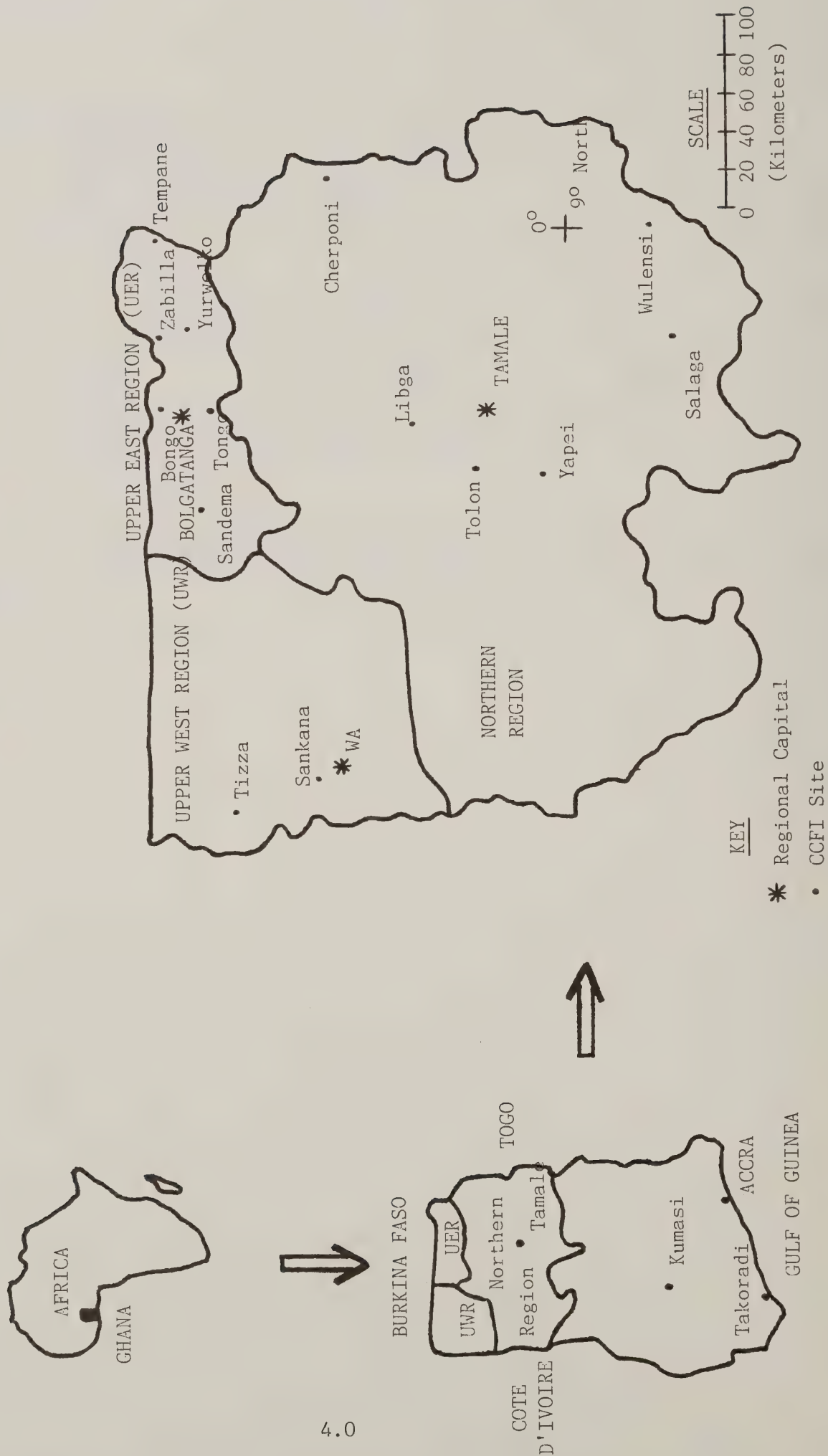
### SITE DESCRIPTIONS

This appendix contains a description of all existing CCFI sites, grouped by year established (1988, 1989, 1990). A standard format is used to describe each site.

# COLLABORATIVE COMMUNITY FORESTRY INITIATIVE

## SITE LOCATIONS

(Existing and Proposed As Of 9/1/91)





## COLLABORATIVE COMMUNITY FORESTRY INITIATIVE

### SITE DESCRIPTIONS

#### Introduction

The following pages contain descriptions of the eleven CCFI sites; the same framework is used for all locations. Descriptions are based on interviews with Peace Corps Volunteers and local inhabitants working at the sites, observations of the CCFI evaluation team, and reports as submitted by the nursery managers. These descriptions do not pretend to give an exhaustive view of the sites, but are meant to give an overview of each location. Information concerning nursery production figures is covered in Appendix 5.

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#### SITES ESTABLISHED IN 1988

##### BONGO

Location and General Information: The town of Bongo is about fifteen kilometers from Bolgatanga, and less than ten kilometers from the Burkina Faso border. The nursery is two kilometers from the town and a short walk from a nearby road. (A four-wheel truck can get within 100 meters of the nursery). The nursery manager's house is about one kilometer from the nursery.

Peace Corps Volunteer (as of September, 1991): Amy Shrock

Nursery Workers: There are fifteen nursery workers, nine of whom are women. One woman and one man are literate. The man (Issah Asurduna) speaks some English and was the primary source of on-site information. There is no foreman and the books are kept by the PCV. There are biweekly worker's meetings, which allow each worker to be a "floor person" on a rotation. In one of the reports (March, 1991), Amy mentions the dismissal of the foreman and a search for a new one.

The workers are on the pilot program. According to Amy (interviewed while in Accra), it is better than the traditional program as "they won't let the trees die - it is the money that they want". Further, she says that there does not seem to be any difference in the number of seedlings produced by men and women. She also feels that the workers prefer working communally (especially the women). A visit to the nursery confirmed what she had said. Although the workers have assigned beds, they were working as a group.

Community Committee: None active.

Nursery Description: The nursery is well established and appeared well organized. It is on high ground and water logging did not appear to be a problem. Young, planted leucaena trees provide low levels of natural shade. There are three shallow wells; each serves five workers. The wells are new this year. The water source was a dugout, but it is no longer functional. (This dugout served a smaller nursery, which was in existence before CCFI started, but ceased to function when CCFI was initiated.) During the dry season water is a problem, but the wells have not dried up yet.

Seedling Distribution and Outplantings: Issah mentioned that villagers from over thirty communities have outplanted seedlings. Some seedlings were sold. The people took seedlings from the nursery and transported them back to their villages. Farmers tended to intercrop; community groups planted trees only. There is no community woodlot in Bongo (but they do have roadside plantings). The nearby community of Bonju is the only one with a community woodlot. The June, 1991 report states that, "during this rainy season there have been two short droughts thereby killing many of the outplanted trees."

There is a demonstration plot near the nursery. {It was not visited and the type of demonstration not determined.} There were some trees planted near the nursery, some alongside the road, and some in two small blocks. Catchment/water holding areas were constructed around many of the trees. The catchments were one or two years old; some were broken/eroded. In one of the small blocks it appeared that the trees were planted for amenity purposes. For example, there were Cassia spp. and Delonix spp. planted at about 1 1/2 meter spacing. In another block neem had been planted. Browsing of these trees was evident.

Extension: In the last year, according to Amy, there were between 25-30 extension sessions held in ten different villages. There were between 10 - 50 farmers present at each of these sessions. She has nursery workers assist with extension in their respective villages. Some of these villages have been visited four times. The visual aids made for CCFI have been used and everyone considered them a great help in carrying out extension. Drama was also used: "How trees are going to be good for you and how they are beneficial!". Although it was only tried once, it appears to have been a success. Song was also mentioned as effective means of carrying out extension.

Income Generation: Mango seedlings have been sold for 50 cedis at the nursery and 100 cedis in Bolgatanga. The CCFI nursery rented a donkey cart five times to take the seedlings to Bolga. The rental cost was 2500 cedis per trip but they made 5000 cedis. Grafting of mangos has been tried, but not successfully. Fortunately there are "Burkina" mangos growing at a local Catholic mission; thus there is an ample supply of quality grafting stock. Grafted mangos currently sell for 600 cedis each, but the size of the market is not known.

Amy said that the workers tried to raise fowl, but it was not successful. She said the people do not appear very motivated. Amy has thought of working with improved wood stoves and selling enclosures made of sticks to protect the seedlings, but has not yet embarked on either of these projects.

Comments: The nursery is well established, especially now that the wells have been dug, however, a severe drought may still limit seedling production. The workers appear dedicated and happy with their work. Nursery management is still firmly in the hands of the PCV. Though it may be difficult, this should change as soon as possible. Outplantings of teak were not seen, but the performance of other species was less than expected. Extension has been initiated and will be expanded; hopefully other innovative ideas such as drama will be incorporated into the extension program.

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## CHEREPONI

Location and General Information: Chereponi has about 2,500 residents and is located within a few kilometers of the Togo border. A minimum of three hours is needed to travel by road from Tamale and due to the rains in late August it took nearly five hours to make the trip. The area between Tamale and Yendi (about half way to Chereponi) is relatively well forested, thereafter open savanna is more prevalent, and around Chereponi there are few trees. "Old timers", who came from what is now Togo, say it was this way when people first arrived.

The nursery is on one edge of the community and next to a dugout which serves as the primary water source. The nursery manager's house is next to the nursery.

Peace Corps Volunteer (as of September, 1991): Larry Lutz

Nursery Workers: There are ten workers, seven of whom are women. When Larry arrived there was a foreman and the nursery used the traditional system. However, Larry noted problems with the division of labor and instituted an "individual approach" with no foreman. Each worker now has six seed beds. They grow two of neem, two of teak, one of leucaena, and one with other species. Record keeping is not specific to one person; all who are literate help keep track. He said the workers seem to like it, but the approach is new, and he was not certain how it would work.

He has also allocated secondary activities to the workers based on activities he and the workers identified. Each activity has a primary person and an assistant and include: raising rabbits and chickens, bee keeping, fruit/nut orchard, extension, fuel efficient stoves, and landscaping.

His feeling is that there is a better chance for the nursery to succeed as a private rather than a community venture, and perhaps may do well as a co-op. The possible structure of such a venture was not discussed in detail.

Community Committee: There was one when the first PCV was at Chereponi, however, there were problems (alleged thefts by members or relatives of members) and the Committee was abolished. Larry wants to reactivate the Committee and prefers to have representatives from several villages other than just Chereponi. His rationale is that the total seedlings planted in Chereponi are less than those from surrounding villages.

Nursery Description: The nursery is very well maintained. A number of beds have light shade from leucaena trees, others are open to full sunlight. There is a gravity fed water source from the dugout (like Salaga and Tolon). Using buckets, water is put into a basin and flows through a pipe to a nursery holding tank. Larry said he would like to improve efficiency by either installing a solar pump or having the nursery water system hooked up when the town puts in its water supply system.

There is a tool shed at the nursery that is neat and well kept. There also is a heavy shade/potting area. Food rations are presently kept in Larry's house but he wants to build a room that could be used for storage.

Seedling Distribution and Outplanting: People from over twenty-five villages, some twenty kilometers away, came to the nursery to pick up tree seedlings. Plantings by these villagers



has been done on a communal basis. Larry said that the people were "hungry for trees" and this year about 80% of total production was distributed. The people prefer neem over teak. Many other species are also sought after, including Terminalia catapa, Samanea saman and Gmelina arborea.

Extension: Larry had assistance visiting 30 villages from the Forestry Officer in Yendi. They organized an initial "public relations" trip during which they introduced themselves and the program, engaged the villagers in a discussion about the benefits of trees, and demonstrated how they could prepare areas for planting trees. During a subsequent trip, they returned to find out how large of an area had been prepared. After this second trip, the villagers came to the nursery to get the seedlings. A third visit is planned towards the end of the rains to monitor survival rates. Also, discussions will be held concerning the problems associated with bush fires and how to help make sure the trees survive.

Income Generation: Fruit tree seedlings are sold at 50 cedis each at 1000 per week in the market. Larry is considering providing people with seedlings, such as, neem if they buy fruit trees. Mango seedlings die in Chereponi and so the local people prefer other fruit trees. Mango does well in other villages and is the referred seedling.

Comments: The nursery is well established and the extension program is also well under way. Larry feels that it is time for a small business PCV to be assigned there to lead the nursery further towards self-sufficiency. However, there is still a need for a person with technical and human relations skills to help create the fruit/nut orchard, to introduce bee keeping, and to continue to expand on the extension efforts. Perhaps even more of a challenge is re-creation of a Community/District Committee. To help make the nursery self-sustaining there must either be a foreman, or labor sharing, that will continue without an outside presence. At some stage the PCV must become an advisor to the nursery which would then have one or more persons to run all operations.

As Chereponi is remote, it is not easy for the PCVs to travel into Tamale for the regularly scheduled regional meetings and trainings. It does have access to a local Catholic mission with radio contact to the "outside world".

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## SALAGA

Location and General Information: Salaga, a town of about 10,000 people, is roughly two "road hours" south of Tamale. The nursery site is near the main road and outside of the town. There is a nursery sign at the roadside. As the nursery is outside of Salaga it is difficult to attract visitors. The nursery manager's house is right next to the main road and the nursery is about a 100 meter walk from the house.

The physical environment around Salaga is different from that around Chereponi or in the Upper East Region. Trees and shrubs are much more plentiful and there is little open savanna.

Peace Corps Volunteer (as of September, 1991): Tracy Roberts

Nursery Workers: There are ten workers operating under the traditional system. There is a foreman but Tracy does most of the booking and record keeping. She has worked progressively more with the foreman and would like to get him more involved in the CCFI process such as attending the Annual Review Meeting.

Community Committee: It has been in existence since May, 1991. One member is Ibrahim Adamu, who is formerly with Amasachina, is with a CDR and has been involved with CCFI since 1988. Tracy selected the four person, all male Committee. Her criteria included those individuals who had shown interest in the project, had lived in the District for a long time, and were literate. Unfortunately, one member is preparing to move out of the area. The Committee has met twice and Tracy is looking for ways for them to assist the nursery.

Nursery Description: The nursery obtains its water from a nearby dugout, which nearly dries up in the middle of the dry season. A gravity-fed system {also found in Tolon and Chereponi} is used here. There is no tool shed at the nursery and the posts for the potting shed had just collapsed.

The nursery area is about 1 1/2 times larger than any other CCFI site, however, although most of the area has been put into beds a significant portion is not used for nursery production due to low seedling demand. In one report, Tracy asked about developing the land for agricultural projects.

Trees grown for natural shade are found throughout the nursery. In some areas they are providing too much shade and should be cut back. Roberts wanted to do so but the nursery workers objected. Due to heavy rains some of the trees became water logged and fell over.

Overall, the nursery is well established. Improvements in its infrastructure are needed and the issue of what to do with "excess" land should be addressed.

Seedling Distribution and Outplantings: Most preferred species are fruit trees, especially certain types of mangos. However, as Tracy reported, "I learned that Salaga town people do not have the sophistication/education to appreciate trees for environmental reasons alone. The semi-bush surroundings and generally good ground cover of the area makes it difficult for people to see the need for heavy afforestation efforts. Their desires are for trees which provide food and/or shade. Very few people are interested in planting any of the afforestation species on their farms." However, she does go on to say that "albizzia and leucaena did quite well in outplanting (and) the CDR obligatory tree planting projects contributed significantly to the number of tree species outplanted."

Extension: Tracy said that she has spent a lot of time with individuals in town, on an individual tree basis, as she is perceived as a tree expert. Happy that people are interested, she has two concerns. First, she feels that her time is not used effectively (vs. group extension), so she is looking for ways to have a higher profile. Second, often times people expect her to do everything including the transport and planting of trees.

She has tried to get the town people to come to the nursery, with some success. In addition, she has gone to villages in the area, discussed tree planting with Amasachina women, introduced the extension package to the workers. One worker practiced presenting the extension package to the other workers, but they have not made presentations to farmers yet.

Income Generation: The sale of seedlings has generated 28,000 cedis. Tracy wants to add activities which would help make the nursery self-sufficient such as, vegetable gardening and selling seedlings in the market.

Comments: Further steps should be taken to enhance the nursery foreman's capabilities. The nursery should experiment with other projects, such as, agriculture to assist it in becoming self sufficient. Infrastructure should be upgraded to include an area for food-aid storage (it has been kept at the home of Ibrahim Adamu). There is demand for mangos, other fruits, and cashews and supply should meet this demand including grafted mango stock. Local attempts at grafting, as with other nurseries, has not been successful. Training of the local staff in grafting and other skills is required.

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## SITES ESTABLISHED IN 1989

### TOLON

Location and General Information: The town of Tolon {3,500 residents} is less than an hour outside of Tamale. The nursery is just outside of Tolon and next to a dugout which is used as the water source. There is a nursery sign board on the roadside and the nursery manager's house is located in Tolon, two kilometers from the nursery.

Peace Corps Volunteer (as of September, 1991): K. Scharge. (In PST during the evaluation).

Nursery Workers: There are ten male workers. Al-Hassame Sahfu (Bob) is the foreman and was interviewed by the evaluation team. The ten were chosen from workers who constructed the nursery manager's house. The foreman helps pick up food-aid rations and salary money from Tamale and also provides supervision, collects money from seedling sales, keeps records in the receipt book, and makes deposits in the bank.

Community Committee: According to the foreman there is none. He mentioned that there is a local committee that helps organize communal efforts.

Nursery Description: A wire fence surrounds the nursery. Seedlings have been planted around the nursery site and will eventually be the nursery's fence posts. There is a gravity-fed water system, the same as used at Chereponi and Salaga. There is also a cement block tool shed with a galvanized steel sheet roof in which tools and treated bicycle boxes kept. Due to heavy rains the nursery was wet and the area was very weedy.

A second nursery, also used as a fruit tree orchard, has been established on the other side of the road. It is also fenced and is on higher ground, which permits earlier planting of seedlings. However, water may be more problematic. A nearby earthen bund used as a water catchment is partially broken. How severe the water problem may be is not known. In the orchard area mangos, grafted and non-grafted, and cashews have been planted.

Seedling Distribution and Outplantings: A good record system has been set up and maintained. There is a seedling distribution journal with the headings: Date, Village, Species, Number, How Prepared, and Who Received. Reports are also generated. In a one page summary sheet dated 8/March/91 and titled "Outplanting and Survival Report for June-August 1990 Outplanting Season", the information recorded included total trees



outplanted and survival of outplanted trees. There were 42,550 trees outplanted with 80% and 59% survival rates in December and February, respectively.

Though final information was not yet available from the 1991 season, based on the May-July reports, an estimated 82,023 seedlings were distributed. The species most in demand was teak followed by neem. However, many varieties of both fruit and non-fruit were planted. The evaluation team visited one out-planted site which had an estimated survival of over 75%.

Extension: To help inform villagers that extensionists were coming, CDR's were contacted a day in advance. The next day the extensionists use visual aids to present the first extension session which they call the "public relations" visit. The nursery managers conduct the sessions (The Oakley's, Volunteers previously stationed to Tolon, helped prepare the extension packet, described in Appendix 7.) The next session they conduct a follow-up visit and help the people mark planting sites. (A total of four nursery people will do this). As a last step, they go back in November to check survival and look for any problems. Records are kept of visits and reported in the "extension update" section of the reports. There is also an "extension log book" that has the following headings: Date, Village, Contact Person, Number of People, and Wants To Plant (What Species).

Income Generation: Tolon sold mangos for 100 cedis, and guava, cashew, papaya and Indian almond for 20 cedis. The foreman mentioned they plan to raise the cashew seedling price to 200 cedis, and the almond price to 100 cedis. The exact amount of income generated in 1991 was not determined. However, as the bank account had a balance of 175,035 cedis on 25 August, it appeared that money was earned.

Comments: For a nursery that is only two plus years old, it is doing very well. If the foreman is allowed to take on more responsibility he should be elevated to the post of nursery manager. This would then cast the PCV in the role of an advisor with a change in corresponding responsibilities. As with many other sites there was no Community Committee, and that might be a good project for the next PCV to undertake.

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### LIBGA

Location and General Information: Libga is located thirty minutes north of Tamale off the main road to Bolgatanga. There is a nicely painted sign alongside the road which proclaims that a CCFI nursery is near at hand. The nursery is about 1 1/2 kilometers from the main road and very close to Libga.

Peace Corps Volunteer (as of September, 1991): Brian Mumma

Nursery Workers: The nursery is on the pilot program with twelve male and four female workers. Eleven are from Libga and five are from other communities. All have worked with the nursery since its inception. At the nursery site Zacheria "Zack" Abukari, introduced himself as the assistant nursery manager. He is the only literate worker at the nursery though the others would like to learn to write.

Community Committee: According to Brian there are four Committee members, but they have not met as a group.

Nursery Description: The nursery is a fenced one-half hectare site with a wooden gate which is locked. The fencing is a mixture of brush cuttings and barbed wire. According to Abukari the land belonged to the Ministry of Agriculture. There are papaya and leucaena planted throughout the nursery. {The papaya is for fruit and the leucaena for shade}. There is an IFAD nursery next to the CCFI site which produces mainly leucaena for agroforestry plantings.

Seedling Distribution and Outplanting: According to Abukari the demand for seedlings was greater than the supply. Mangos are popular, grafted varieties are preferred. (The IFAD nursery had some grafted stock, which they sold for 700 cedis each.) Teak is in high demand, and they plan to produce even more next year.

One outplanted site was 2 1/2 hectares of teak planted along with guinea corn and peanuts. (Survival is 90+ percent). In the Libga area there is no communal land and the land was purchased from a farmer by a community group. A man was hired to plow the field and he planted the corn and peanuts. For preparing the field his payment will consist of the harvested crops. This woodlot was near another village but, when asked about protection problems, Abukari indicated that people in this second village had their own woodlot and would not disturb theirs. He said their plan is to harvest pole-size teak from their woodlots and they have not yet decided what the income will be used for or how it will be distributed. They want to plant more and the group plans to buy another two to three hectares for next year's planting.

Extension: According to Brian, they have worked with forty communities which have several different groups. About sixty percent of the trees outplanted were done by people that attended a presentation on how to plant trees. Forty such presentations were attended by anywhere from two to thirty people. According to the April, 1991 report by Jerry Perez (former Nursery Manager) "Interest (in the program) is much greater as compared to last year..."

Perez emphasized that public education and extension should be combined. For example, initial discussions included the importance of outplanting, bush fires, and the protection of trees. This was followed by emphasizing preparation of the farms for planting, proper spacing of the trees, and digging planting holes.

Two notes of special interest include: 1) Many groups had strong enough interest in tree planting that they put up an advance deposit of 1000 cedis to ensure that they would get seedlings; and 2) The March, 1991 report states that an Amasachina Representative, Holidu Mullah, came and assisted with the extension effort. It is one of the few indications that Amasachina is still actively participating in the project.

Income Generation: From September 1990 to June 1 1991 a total of 50,150 cedis were generated from the sale of seedlings. According to the April and May, 1991 reports this money was reinvested in the nursery for either seed collection or maintaining the infrastructure.

Comments: This two year old nursery has progressed tremendously. There are young agroforestry plantations on land purchased by community groups. With the IFAD nursery adjacent to the CCFI nursery there will probably be little demand to produce leucaena but CCFI should have a competitive edge in producing teak and neem and to a lesser extent grafted mango.

As the nursery strives for self-sufficiency the question arises concerning the sale of tree seedlings such as teak. There is a general Forestry Department policy which states that forest species, such as teak, should not be sold. At some stage this will come into direct conflict with a nursery that strives to be self-sustaining.

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### YURWELKO

Location and General Information: Yurwelko (which has a dispersed group of houses rather than a centralized community) is located four kilometers off a main road. The closest CCFI site is Zebilla which can be reached by bicycle. The PCV in Zebilla visits from time to time. There was a PCV stationed here but due to various circumstances the Volunteer was transferred to Tizza. It is the only site run without direct PCV presence. Although Peace Corps has officially stated that the reason for not stationing a PCV there is that it has limited access to medical services, this has not been communicated to the people of Yurwelko.

Nursery Workers: The nursery uses the traditional system which the Community Committee has slightly altered. They have seven permanent workers and six rotating members (three each month). The policy is that if a permanent member misbehaves, the Community Committee will replace him/her with a rotating member. It appeared that most if not all of the workers were men. When asked if there were any worker problems illiteracy was mentioned.

Community Committee: Of all the CCFI sites this one has the most active Community Committee. There is no PCV to "dominate" the nursery's activities and there are dedicated individuals in Yurwelko who want to see the nursery work and benefit their people. The Chairman of the Committee is the Chief, the Vice-Chairman Reverend Jacob. Another member is Samuel Atotura, a teacher, Vice-Secretary of the Committee, and the person who reports to the CCFI Coordinator and attends the Annual Review Workshops. Both the Rev. Jacob and Samuel Atotura were available, helpful and provided very useful insight into a number of issues.

The Committee has two main roles, overseeing the work and paying the workers and as part of these functions they keep records that are forwarded to the CCFI Coordinator.

Nursery Description: The tree nursery is of a similar size to those found in other CCFI sites and is also fenced. The nursery is well tended and appears to be well run in spite of having a well which occasionally dries up. The well can not be deepened due to a rock layer, so production is limited. To create a more secure water source the Committee wants to construct a dugout.

The nursery produced 40,000 seedlings last year. There was good demand for them as evidenced by few remaining seedlings in the nursery.



Seedling Distribution and Outplanting: Many species were produced, including mango, leucaena, teak, albizzia, dawa dawa, kapok, cashew, and neem. The preferred seedlings were teak and mangos. Teak was planted in a demonstration woodlot next to the nursery. The neem was surviving, but was chlorotic. The teak was doing well and has survival of over 75%. Individuals and institutions (schools, CDRs, and churches) as well as other village committees planted seedlings.

Extension: After the initial work of Amasachina there was no formal program initiated. However, there appears to be an effective word of mouth campaign which disseminates the news of their work to surrounding areas.

Income Generation: Seedling sales to institutions netted 24,000 cedis. In addition, they made an additional 30,000 on a sale to the retired Japanese man in Zebilla (see the description of that site). They would like to diversify into dry-season vegetable gardening.

Comments: It was impressive to see what this community was doing. An issue that needs resolution includes a written explanation from Peace Corps to the people of Yurwelko concerning the status of PCVs. Following that the Nursery Manager's house - now vacant - should be resolved. It was suggested by the Committee that whoever is named Nursery Manager live there as soon as possible. The longer the home stays empty the harder it will be to maintain it. The nursery water source is of importance but the cost to upgrade may be a larger issue. Also, CCFI might look closely to see how this Community Committee functions. It is apparently the most successful one in the CCFI project.

### TEMPANE

Location and General Information: Tempane is very near the border of Togo and one passes through Ghana's border check point before reaching the nursery. The nearest CCFI site is Zebilla but conditions at Tempane are very different. At Tempane there is lack of transport, little cash, and the area has been heavily impacted by drought.

Peace Corps Volunteer (as of September, 1991): Joshua Bunker.

Nursery Workers: There are ten workers at the nursery, nine of whom are men. Four of the men are literate and the only woman is illiterate. The same workers have remained on the job throughout the life of the project and according to Bunker, "they have proved themselves to be the true strength of this initiative." As of March the "Worker of the Month" was established and the first recipient was a person who showed leadership both in the nursery and the community.

Community Committee: None known.

Nursery Description: The nursery is very neat and tidy and the site is fenced with two walk-in wells that serve as sources of water. There is an orderly tool shed and a pit compost pile.

In all there were 14 beds of teak that had been started and 20 additional beds of teak

that were used as germination beds as the teak had excellent germination. There was also one bed where the workers were apparently growing onions.

One problem at the nursery is excessive desiccation. As per the 1991 first quarter report, Bunker noted that there was not sufficient shade and wind breaks to prevent huge losses of moisture from the nursery. He believed that, during the first quarter this was the primary cause of the loss in nursery stock.

Seedling Distribution and Outplantings: The nursery produced 126,174 seedlings with neem the largest in number (85,999). Neem was one of the most popular species and the other species in demand were mango, leucaena, and teak. According to a report by Joshua, farmers have done some encouraging things, however, he also states in some places there is only evidence of planting holes where the trees were planted.

There is a plantation around the PCV's house which has a very high survival rate (93%). The trees were not protected or fenced and three species were planted: teak, neem and acacia. Although survival was excellent some of the plants were in need of weeding. Mulching of the seedlings might help them survive better through the dry season (though termites may pose more of a problem with mulch).

Extension: Extension has been initiated within a fifteen kilometer radius of the nursery by the nursery workers on a rotating basis. All the workers know how to use the extension posters in the extension sessions and a total of forty extension sessions have been held. The number of people attending the sessions ranged from 15 to 1000 with the average from 30-80. At least four sessions had over 200 people.

One issue that has been raised is transportation for the seedlings. People say, "Great, we will take your trees, but we do not have the time to come and get them."

The first large extension education effort done by CCFI in Tempane was held on March 15, in the mango grove adjacent to the nursery. Some 640 people - representing all major interest groups in Tempane - attended and listened to speeches (concerning subjects, such as, the need to grow trees and have united community participation). {There was also dancing and violin playing}.

An education program has also been initiated for the workers. Topics discussed in these sessions with nursery workers included: transplanting, agroforestry, woodlots, community projects, bush burning, desertification, extension methods, seed germination techniques, ineffective Fire Fighting Volunteers, and education of the community concerning a broad spectrum of environmental concerns.

Income Generation: Mango seedlings have been sold, first for 50 cedis each, then two for 50, and finally three for 50 with a total income this year of 17,000 cedis. The workers have thought about other types of income generating activities including buying agricultural seeds for resale when prices are higher.

Comments: Bunker made the observation that CCFI would be more effective if they lowered production targets to 50,000 seedlings per site and monitored the plantings more closely. With the current number of workers the lower production target is more feasible.

He feels that the project is working. The workers can articulate and pass on ideas and have demonstrated good work in transforming the nursery from low production into a highly

productive site. He feels that his toughest job is to help make the nursery self sufficient and that the nursery will never be self supporting if it only sells trees.

Interestingly, he noted that he may start another nursery at the Catholic Mission. If there is a problem of transport between the current nursery and the Mission, it may be a wise move. However, it is suggested that it may be better to concentrate on the first nursery and what could be done to help assure its future sustainability, whatever form that may take.

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## SITES ESTABLISHED IN 1990

### SANKANA

Location/General Information: It is one of two sites in the Upper West Region {The other is Tizza}. Of the two, Sankana is closer to the regional capital, Wa. Like Tizza, there is less environmental stress than that experienced around CCFI sites in the Upper East and Northern Regions.

Leigh Ann Spence, the PCV at Sankana, was on vacation in Accra during the evaluation and was interviewed there. A site visit was made and local people interviewed.

Peace Corps Volunteer (as of September, 1991): Leigh Ann Spence.

Nursery Workers: This site is on the "pilot" program with a total of seventeen workers, four of whom are women. There is a foreman who has seventeen years of experience working with cocoa and, according to Spence, is a "gift from heaven". All workers, including the foreman, are paid on the same scale. Ten of the workers come from Sankana, the others from nearby villages. They participate in activities outside of the nursery including extension. The workers also divide up the food rations. As they are on the pilot program their primary incentive is to raise as many seedlings as possible and not concentrate on other tasks. One worker stated, "We prefer getting paid monthly; the production would be the same as it is now." However, according to Leigh Ann, if there was any move to change to the "traditional" approach there could be a problem of morale. The reason for this is that they have seventeen workers and under the "traditional" nurseries a maximum of ten workers are allowed.

The foreman keeps daily records of activities within the nursery and does a good job of it. He, along with two others, count the tree seedlings. This is used to determine the payment for each worker.

Community Committee: According to Leigh Ann, a Committee of nine was established but, because they were "more trouble than they were worth", seven were sacked. One of those remaining, the Rev. Pastor John Bagonlur, is said by Leigh Ann to be "great". The June monthly report states that the Committee will gradually be reformed based on those who are interested in the project.

Nursery Description: The fenced nursery site is 200 meters by 40 meters and has a tool shed. The site was originally several fish ponds and there is an irrigation canal next to the long side of the nursery. Seedlings are planted in raised beds constructed in the bottom of the abandoned fish beds and are watered by "flood" irrigating the beds. Although the beds are raised, to get root aeration, they should be raised even more. At the time of the



evaluation, again due to heavy rains, the nursery was partially flooded. The heavy rains may be unusual but should be accounted for in future planning.

Production exceeded demand and the nursery had excess stock. This was due to higher production levels associated with the "pilot" nurseries and that this was the first year of this nurseries' existence (thus a trial period). The nursery was also unkept, that is, weedy with old plastic bags lying around. The weeds could be attributed, in part, to the heavy rains.

Seedling Distribution and Outplantings: A plantation of teak, located about 400 meters from the village of Kalao was visited. The seedlings were planted in early May in a field that had been used to pasture goats. Because of the heavy rains some of the planting holes were filled with water and survival was estimated at 58%. Replanting was scheduled for the following week (late August). There was an apparent need for weeding.

In total, about 60,000 seedlings were outplanted. Womens' groups planted more than any other group. According to the July report, certain species were distributed in large numbers: teak, neem, albizzia, and leucaena. However, each of these also had significant remaining stocks. Of fruit and nut trees, mangos and cashews were distributed in largest numbers.

Extension: According to Leigh Ann, the workers participate in extension on a voluntary basis with her but that they have not yet done it on their own. The six workers interviewed all mentioned that they had visited villages and the Rev. Pastor said that they have used the posters developed for the extension sessions. Planting demonstrations have also been used.

Income Generation: Fruit and nut tree seedlings have been sold for 20 cedis each and the July report notes nursery income at 12,240 cedis. Additionally, some vegetables were planted at the nursery (perhaps only for the worker's own consumption), groundnuts were farmed, and 100-200 cashew trees were planted for future income.

Comments: As with most other nurseries the seedling supply and demand function needs fine tuning. The nurseries' untidiness could be attributed - in part - to the "pilot" program. That is, emphasis is placed on production over other project components. However, this should not be used as an excuse. Part of anyone's job description can be to do other tasks no matter what type of payment scheme. It is the role of management to help assure that all tasks are accomplished.

The foreman may be one of those targeted early for selection as a Nursery Manager (however the CCFI Annual Review should decide on how to proceed with this process). If selected he, like the foreman at Tolon, will need to acquire additional skills specifically to handle those tasks currently being handled by the PVC. This transition will take time, training, and patience. However, it is an important move both symbolically and practically.

## TIZZA

Location and General Information: The nursery in Tizza is across the road from the nursery manager's house and is one of two sites in the Upper West Region. Both of them are quite far removed from other CCFI sites which adds to the project's logistical constraints. The areas where the two sites are located are under less ecological stress than the Upper East and much of the Northern Regions.

Peace Corps Volunteer (as of September, 1991): Jamie McGowen.

Nursery Workers: There are ten workers of whom nine are men. According to Jamie, "2 1/2 are literate and most speak some english. A foreman and an assistant foreman have been assigned and the best workers are literate. She has struggled to get more women involved but they do not have good attendance due to other commitments at home.

Community Committee: There is a CCFI Community Committee that has regular meetings once a month with the Nursery Manager. The seven member Committee has an elected chairman, secretary and treasurer. Some of the members are government workers. The Committee's duties are to monitor the work and carry out education. According to McGowen, they do not want to get more involved because they do not receive food aid and feel that they, as well as the workers, should receive food. She noted that there have been many problems with the Committee including irregular attendance at meetings. Also they never visit the nursery or help with outplanting. She is in daily contact with the chairman with whom she works and consults.

Nursery Description: Because of very wet weather there was some flooding in the nursery. Some of the beds were prepared but the area was too wet to work. Many tree were still in the nursery - over 40% of production (total production estimated at 35,732). However, this percentage can be misleading, as 75% of the teak (3000 out of 4000) had been outplanted as of July 4. At the nursery there is a "trial" of leucaena intercropped with papaya and ground nuts which was done by the nursery workers.

The nursery ran out of water in January and a nearby pond had to be de-silted to meet the demand for water. There is also a water catchment area which but it is silted up and not useable.

Seedling Distribution and Outplantings: A two acre plantation site which had been planted about a month prior to the evaluation mission was visited. It is next to the village on land given by a regent (substitute chief) for a "community planting". (A question may arise as to what percentage of receipts he will get when the trees are harvested.) A check showed 100% survival and planting had been done at about a 1 1/2 m by 1 1/2 m spacing. The area had been a pasture, and there was considerable grass cover. Competition with the grass will probably be a factor to consider. Due to the heavy rains, many of the seedlings were under water.

According to Jamie, the most popular species was avocado and next in popularity was Carya senegalensis. There is no interest in neem as it is considered a weed.

Extension: Demonstrations were held for tree planting in ten different communities and according to Jamie there was not much interest. She also visited people when they were ready to begin planting and had fifteen meetings with groups ranging from ten to sixty people. She would first meet with the chief and ask them to set up a meeting; if she did not hear from them, she would not go back. At least one of the nursery workers was involved in extension and went to seven villages.

According to the monthly reports at least three to four extension related activities occurred each month. In addition to community meetings, a dialogue was recorded for GBC (Ghana Broadcast Corporation) and aired on GBC-URA radio. An interview was held with

a reporter from the People's Daily Graphic and the Tizza and Sankana CCFI sites made headlines. Other extension activities including writing letters to secondary schools, district assemblies, to inform them of CCFI and the necessity of planting trees. Lastly an agro-forestry committee was formed by the District Secretary to encourage tree planting, woodlots, and nursery establishment.

Income Generation: Revenue has been generated and as of July 4 reached a total of 11,900 cedis. (It is assumed this was from the sale of seedlings.) Additionally, the demonstration site was set up with the idea of generating income. The demonstration plot is a cashew nut plantation.

Comments: Although there may appear to be little interest on the part of local people, it must be emphasized that this is the first year for the nursery. Also meetings as indicated in the monthly reports were always relatively well attended. It takes time to establish a program especially tree planting in an area with little environmental stress. Methods that succeed here are not necessarily the same as that undertaken in the Upper East and different strategies should be developed to meet Tizza's needs.

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## TONGO

Location and General Information: Tongo is south of Bolgatanga off the main Tamale road and in the Upper East Region. The nursery is two or three kilometers from the town center and next to a dug out (the nurseries' water source). It is also near the village of Gbego. The PCV was on vacation during the evaluation but interviews were conducted with two of the nursery workers.

Peace Corps Volunteer (as of September, 1991): Mark Brunigs

Nursery Workers: There are ten workers with five each from Tongo and Gbego. At the beginning of the project there were twenty, but after the nursery was completed only ten were retained. Based on a monthly report, it is noted that one of the workers (Yinamya Begn) has been assigned as the supervisor. All are male although in the original group there were two women. One of the two workers interviewed asked if they will be hired as full time laborers by the Forestry Department when the CCFI component is over. Although CCFI has been explained to the workers the concept is not fully understood.

Note: One of the start up problems with this site noted in several monthly reports. This was the issue of compensation for ten people not retained.

Community Committee: A Committee exists, but the workers were unsure of its composition. According to Marks's June and July reports it took several attempts to organize a permanent CCFI Committee and although it was successfully organized it has not yet met and elected officers. This would be taken up in September.

Nursery Description: At the time of the evaluation the nursery was almost bare of seedlings with the exception of cashew and a few scattered other species. There is a fence around the



perimeter and one large tree inside the fence line. No trees had been planted around the perimeter and little effort had been made to prepare for next year's planting. As there is no tool shed, nursery supplies and equipment are kept in a near by rented "shed". This is not optimum as the building is old and little storage space.

One issue at the nursery relates to a proposed enlargement of the dugout's dam. Mark mentioned in his July report that if the dam is enlarged he could move the nursery but he should stop planting until the move is complete. No movement on this was noted.

Seedling Distribution and Outplanting: Small scale plantings were seen around the nursery site and in two small blocks along the road/trail leading to the nursery. The leucaena outplanted near the nursery was barely alive; it was guessed that they may have been planted without enough care given to the seedling's roots. The workers said that a number of community groups took seedlings. Almost 20,000 seedlings were produced and few were still in the nursery. CDR's have done some planting and Gbezugu planted a communal area.

Extension: In each of the reports a number of villages are noted as having been visited and/or groups contacted. No elaboration is made in the reports as to the extension methods used. The workers also indicate that a number of groups in various communities had been contacted.

Income Generation: In the quarterly report section it notes that 2,050 cedis were made from the sale of fruit trees.

Comments: Perhaps more than any other nursery visited the workers here appear less unified and less clear as to the direction they are taking. However, they do take pride in the nursery and were motivated to make it better. One of the men interviewed had painted CCFI on his hat. It must be noted that the site is only one year old and a foundation for further growth has been established.

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**ZEBILLA**

Location and General Information: This site is in the Upper East Region and close to Yurwelko.

Peace Corps Volunteer (as of September, 1991): David Banks

Nursery Workers: There are ten nursery workers, nine of whom are men. The sole woman and two of the men are literate and three of the others speak some English. All live in Zebilla. Banks uses time sheets to track attendance thus, if a worker is absent, the rest of the workers vote to see if the excuse is legitimate. If not, the worker is fined the equivalent of one day's wages. Two legitimate absences are allowed per month and this procedure was instituted because there had been a problem with absenteeism. A yearly "continual trainee evaluation" has also been established, the purpose of which is to track all the worker's progress.

Community Committee: There is a recently established CCFI Committee whose role is a support group for the project. They will meet every two months. Currently there are eight members, two of whom are workers. There have been some problems with the Committee in that they consider themselves part of the work force and receive food aid and like all the workers.

Nursery Description: The nursery site has three "walk-in" water holes that are located just below the dam of a large catchment. There is a tool shed made of mud blocks and plastered over with concrete. Like many other nurseries they have produced a variety of species. Flowers were also produced to make the place more attractive and have generated a little income.

Seedling Distribution and Outplanting: Most of the nursery production was bought and planted by a retired Japanese businessman. He has established a four hectare agroforestry demonstration plot next to a large water catchment area. His concept of how an agroforestry system should be set up consists of groundnuts inter-planted with kapok (3m by 3m), mangos (3m by 3m), leucaena (0.3m by 0.5m), and neem (1m by 1m). Neem is planted as a live fence around the area. The businessman decided that he wanted to plant another four hectares in November and wanted another 130,000 seedlings (100,000 albizzia, 10,000 mangos, and 20,000 neem).

Local people also have planted seedlings. There is good demand for neem as it survives well in the dry season but overall the number one choice is mango.

Extension: Loans have been given to the workers to buy bicycles and each worker now has one. They pay the loan back at the rate of 3,000 cedis per month. With these bicycles it is easier to get the workers involved in extension.

Some training has been given to the workers on how to conduct extension and they have begun monitoring seedling survival as part of their extension work. In each monthly report a number of village visits are noted; in the June report it states that much of the extension work is done by the workers but that the PCV visits all villages on a bi-monthly basis.

Income Generation: This site, largely due to the sale of seedlings to the retired Japanese businessman, earned in excess of 100,000 cedis. They will earn more during the dry season as he has placed an order for seedlings that he wants to plant in the "off season".

Comments: It is very fortunate what has happened at Zebilla, luck and fate have graced this site's early life. Proper management of this "luck" is important. The fact that a retired Japanese businessman initiated an agroforestry demonstration plot in northern Ghana shows what the media can do. Without GBC television coverage he would have never known of Zebilla's existence.

Separately, housing may be an issue at this site when David leaves. His wife is also a PCV, she is a teacher and they live in housing provided to her. Later, new arrangements may have to be worked out.

## A P P E N D I X 5

### NUMBERS AND TYPES OF SEEDLINGS PRODUCED

Attached are listings, by CCFI site, of seedling production statistics. These numbers were taken from monthly reports (some adapted to fit the table) and are ONLY provided here so as to give an indication of the variety and numbers of species being grown. It is NOT an intention to compare production rates; this should be based on local demand as well as seed and material availability. It is also NOT an attempt to show what will be grown next year, again local demand should be the primary guide.



Collaborative Community Forestry Initiative

Bongo Nursery

**Nursery Stock (As of June 30, 1991)**

Species	Previous Stock	Stock Added	Stock Distributed	Cas (1)	Stock Remaining
Albizzia	5966	27	5566		427
Acacia	0	2047	0		2047
Flamboyant	3200	1937	2500		2637
Guava	1542	-71	300		971
Leuceana	13226	0	2000		11226
Kapok	4372	0	2000		2372
Mango	1500	2220	280		3440
Mahogany	5636	-1112	4000		524
Neem	22177	0	21000		1177
Orange	100	51	151		101
PawPaw	480	1787	1000		1267
Teak	266	119	300		85
Almond	20	0	0		20
Eucalyptus	4	0	4		0
Palm Nut	0	10	10		0
Date Palm	15	0	15		0
Cassia	21728	0	10000		11778
Pusign	0	80	5		75
FrafraTeak	0	20	0		20
Shea Nut	0	20	0		20
AvocadoPear	0	20	0		20
DawaDawa	3300	1865	2000		3165
<b>Total</b>	<b>83,532</b>	<b>8,820</b>	<b>51,131</b>		<b>41,372</b>

(1) Cas. = Casualties

Collaborative Community Forestry Initiative

Chereponi Nursery

Nursery Stock (As of June 30, 1991)

Species	Previous Stock	Stock Added	Stock Distributed	Cas.	Stock Remaining
Albizia	1073	0	100		973
Neem	42262	0	10116		32146
Cajanus	490	0	0		490
Papaya	182	0	14		168
Orange	506	0	9		497
Melina	1030	0	30		1000
Leuceana	37969	0	732		37207
Mango	666	301	62		905
Guava	93	0	24		69
Teak	2679	0	2673		6
Sheanut	270	0	0		270
Apple	282	0	2		280
Cassia	521	0	52		469
Flamboyant	414	0	16		398
Raintree	24	0	7		17
Almond	77	0	10		67
Milk Bush	14	0	0		14
Parkinsonia	24	0	0		24
Kapok	239	0	0		239
Total	88,815	301	13,847	0	75,239

Collaborative Community Forestry Initiative

Salaga Nursery

**Nursery Stock (As of May 31, 1991)**

Species	Previous Stock	Stock Added	Stock Outplanted	Cas.	Stock Remaining
Neem	490 pots 20000 bare root		340		20150
Leuceana	8400		240		8160
Teak	2268		537		1731
Albizzia	3100		54		3046
Cassia	580	260	27		813
Mahogany	524	534	73		985
Mango	1548		526		1022
DawaDawa	129		0		129
Terminalia catappa	65		38		27
Papaya	209	131	10		330
Orange	28		0		28
Cashew	133		3		130
DatePalm	120	0	40		80
Flamboyant	340		60		280
Kapok	15		0	3	12
Ackee Apple	206		6		200
Papaya	9		0		9
Sesbania	16		16		0
Pithecel- oblum	46		0		46
Gliricidia	15		2		13
Edura Mango	0	121			121
DogoDogo mango	0	185			185
TuoTuo mango	0	16			16
<b>Total</b>	<b>38,204</b>	<b>1,247</b>	<b>1,972</b>	<b>3</b>	<b>37,476</b>



**Collaborative Community Forestry Initiative**

Tolon      **Nursery**

**Nursery Stock (As of May 12, 1991)**

Species	Previous Stock	Stock Added	Stock Distributed	Cas.	Stock Remaining
Teak	25500	0	1315		24195
Mango	1485	771	166	0	2090
Indian					
almond	99	0	82		17
Neem B/root	47000	0	8200		38100
Neem Pots	3000	0	223		2877
Leuceana	14000	0	4523		9477
Cassia					
siamea	1600	0	1600		0
Kapok	3000	0	800		2200
Flamboyant	670	0	87		583
Papaya	1264	0	64	860	340
Acacia					
siberiana	80	0	0		80
Albizzia					
lebbek	890	0	244		646
Jackfruit	10	0	5		5
Jatropha	70	0	0		70
Citrus	7	0	5		2
Cashew	303	0	23		72
Mahogany	1716	0	0		1716
Calabash	110	0	14		96
Guava	0	409	5	0	404
<b>Total</b>	<b>100,904</b>	<b>1,180</b>	<b>18,264</b>	<b>860</b>	<b>82,960</b>

Collaborative Community Forestry Initiative

Libga      Nursery

**Nursery Stock (As of May 31, 1991)**

Species	Previous Stock	Stock Added	Stock Distributed	Cas.	Stock Remaining
<u>Potted Stock</u>					
Cashew					1000
Mango					3345
Kapok					386
Leuceana					996
Teak					1060
Date Palm					10
Palm Nut					7
Avocado					38
Guava					373
Shea Nut					672
Citrus					825
Albizza					45
Flamboyant					20
Papaya					30
<u>Bare Root (estimate)</u>					
Teak					35,610
Neem					52,935
<b>Total</b>					<b>97,352</b>

# Collaborative Community Forestry Initiative

## Tempane Nursery

### Nursery Stock (As of March 31, 1991)

Species	Previous Stock	Stock Added	Stock Distributed	Cas.	Stock Remaining
Acacia	0	492	0	0	492
Albizzia	1059	0	0	99	960
Amogolsus	990	0	0	173	817
Cassia	0	257	0	0	257
DawaDawa	0	422	0	0	422
Guava	111	18	0	0	129
Kapok	1614	2750	0	0	4364
Mango	342	0	0	187	155
Millitia	0	18	0	0	18
Orange	425	0	0	71	354
PawPaw	142	3	0	0	145
Teak	2242	1152	0	0	3394
Leuceana*	0	10034	0	0	10034
Neem**					
Total	6,925	15,146	0	530	21,541

\* As of 31/3/91 three beds were broadcast.

\* As of 31/3/91 eighteen beds were broadcast.



Collaborative Community Forestry Initiative

Tizza Nursery

**Nursery stock (As of June 30, 1991)**

Species	Original Stock	Outplanted	Stock Distributed	Cas.	Stock Remaining
Teak	4000	3000			1000
Mahogany	6800	4216			1584
Albizza					
lebbeck	3000	64			2936
Cassia					
siamea	2500	1357			1143
Anogeissus	400	362			38
Leuceana	10000	1000			9000
Dawadawa	1750	95			1655
Terminala					
catappa	9	5			4
Moringa					
oleifera	520	18			502
Jerusalem					
thorn	1200	1100			100
Bombax					
coslatum	420	0			420
Ceiba					
pentandra	7	4			3
PawPaw	1125	206			919
Pear	25	8			17
Orange	94	38			56
Mango	407	209			198
Akee Apple	1279	117			1162
Bauhinia					
rufenids	185	185			----
Militia					
thoningi	212	131			81
Balinites					
aegyptica	185	185			--
Flamboyant	39	15			24
Acacia					
albida	400	23			377
Cocoa	25				25
Cashew	1150	137			1013
Totals	35,732	12,475			23,257

# Collaborative Community Forestry Initiative

## Tongo Nursery

### Nursery Stock (As of May 31, 1991)

Species	Previous Stock	Stock Added	Stock Distributed	Cas.	Stock Remaining
<u>Pots</u>					
Mahogany					120
Kapok					1154
Cashew nut					503
Teak					232
PawPaw					144
Terminalia					36
<u>Bare Root</u> (est.)					
Neem					4367
Albizzia					3291
Leuceana					7953
Millitia					322
Total					18,122*

\* At this stage a number of tree seedlings had been sold and the total 1991 production was 19,163

Collaborative Community Forestry Initiative

Sankana      Nursery

**Nursery Stock (As of June 30, 1991)**

Species	Total Stock Produced	Stock Added In June	Dist. in May	Dist. in June	Present Stock
Teak	20013	1672	4427	110	17148
Anogeissus	276		110	0	166
Orange	2864		138	276	2450
Cassia	645		151	7	487
Kapok	1428		27	0	1401
Albizzia	11741		665	1177	9899
Acacia	305		0	0	305
Flamboyant	3107		150	116	2841
Leuceana	15185		1219	639	13327
Millettia	121		1	0	120
Neem	14157		5,458	300	8399
Jerus. Thorn	1794		311	109	1374
Moringa	1067		137	286	644
Akee Apple	14607		79	113	14415
Cashew	1060	29	116	137	836
Mango	12211		475	361	11375
Apple	3		- 2	1	0
Catappa	30	1	14	2	15
Avacado	19		0	1	18
Dawadawa	4844		40	1	4803
PawPaw	758		13	38	707
MadrasThorn	392		0	0	392
Date Palm	0	4	0	2	2
<b>Total</b>	<b>106,627</b>	<b>1,706</b>	<b>13,531</b>	<b>3,676</b>	<b>91,124</b>



Collaborative Community Forestry Initiative

Zebilla Nursery

Nursery Stock (As of June 30, 1991)

Species	Seedlings Produced	Stock Remaining
Neem	3500	15000
Lebbeck	2000	1500
Leuceana	16000	8,000
Teak	1000	0
Kapok	4000	200
Cassia	2000	100
DawaDawa	2000	1500
Cashew	1000	500
PawPaw	300	100
Millitia	1500	500
Orange	200	100
Mango	1500	200
Tropical almond	120	20
Mahogany	200	50
Madras thorn	200	200
Total	67,020	27,970

## APPENDIX 6

### Innovative Ideas Used in Some Sites

This appendix contains several innovative ideas that have been used to help the CCFI sites operate more effectively. The evaluation team felt that some of these should be documented so that people involved in a similar project might capitalize on these ideas.

## **APPENDIX 6**

### **Innovative Ideas:**

Some of the Volunteers, CCFI staff and workers have developed very interesting ways of handling problems or promoting the project. Some of these are listed below.

**Worker of the Month:** This idea was apparently first tried in Tempane, but the evaluation team does not have any documentation on how it functioned at that site. It was also tried in Libga as the Volunteer said, "I have tried to provide an incentive to the workers. I have created the "worker of the month" - the one who sold the most trees in the market. I take their picture and put it up in the nursery. I also make the person the foreman for the month. For a prize I take him/her for a cold beer and lunch in Tamale - for this month's winner, it was the first cold beer that the man had ever drank and he didn't like it."

**The Community Teak Plantation of Libga:** Adjacent to the village of Libga there is a community teak plantation of approximately six acres. The survival in the recently planted plantation was 90% and the nursery foreman stated that they would replace the dead trees very soon. Because there is no communal land that could be used for tree planting, it was purchased by the community; a community member explained, "we just passed the hat and collected the money from everyone in the village". The cost of the land was 42,000 cedis and a man was contracted to plow the field. The teak seedlings were planted by all the community. The man who plowed the field has also intercropped the six acres with corn and peanuts. As payment for plowing the land, he will have the rights to harvest the corn and peanuts. The community is now looking for another 6 to 8 acres to buy and plant next year.

"We are growing the trees for poles," a community member said. He also said that they would sell the poles "on site" and have someone to come out, cut them and take them away. How the income will be distributed has not yet been decided.

Although the plantation was close to another village the people said they were not worried about people from the other village "taking some of the trees". As one person explained, "they wouldn't do that because they have their own 6 acre plot that they bought and planted - they aren't going to bother ours"

**Loans For Buying Bicycles:** From the income generated in Zebella, the Volunteer has given loans to the nursery workers to buy bicycles. Each of the workers now has one. They pay the loan back at the rate of 3,000 cedis per month. As the Volunteer explained, "the workers have all received training in how to conduct extension and now with these bicycles, it will be a lot easier for workers to get really involved in extension ". He added, " it is not only extension, but now they can monitor the plantations to check survival after the planting season". Boxes have been constructed that can fit on the back of the bicycles, so the bicycles can also be used to deliver seedlings.

At another nursery site they distributed seedlings by bicycles. In this case they made the boxes to fit on the back of the bicycles. They found that they can deliver 700 teak stumps or 50 mango seedlings per trip using the boxes.



**Worker Meetings:** "Every two weeks I have a meeting on the goals of the next week," explained a Volunteer. For these meetings the "floor person" is rotated, thus, everyone has a chance to chair one of these meetings. The Volunteer explained, "I do some interesting things at these meetings. For example, I asked the workers to state one thing they did not like about the project and two things they liked about it. You would be surprised at the stuff that came out. It was here that I found out that some of the women wanted to grow jack fruit".

**Keeping the Workers Time Sheets:** In Zebella the time sheets are hung on the wall of the tool shed in the nursery. One worker is responsible for keeping track of who is working and who is not. If a worker is absent and comes in with an excuse, the rest of the workers vote to determine if the worker's excuse is legitimate. If it is decided that the reason isn't legitimate, then the worker is "fined 300 cedis". (This is about a day's wages). The workers are allowed up to 2 legitimate absences per month. The Volunteer said, "Before we got this system going, I had a lot trouble with workers not showing up for work because 'a grandfathers died' - some lost 4 to 5 grandfathers within a week".

**Growing Flowers:** One Volunteer wanted to make the nursery look "a little prettier" so he planted some flowers around the nursery. Some people who came to the nursery to buy trees saw the flowers which they wanted to buy. There were several types of flowers and they were sold for 20 cedis each.

**Marketing Seedlings:** "This year was a drought year," explained one Volunteer, "so we didn't sell too many mangos around here, even at 50 cedis each". "What we did," she continued, "was rent donkey cart and take the mango seedlings into Bolgatanga where we sold them at 100 cedis each". In total, five donkey carts of mango seedlings were sent into the regional capitol and sold. "Although the cost of renting the donkey cart was 2,500 cedis per trip", explained the Volunteer, "we still made 5,000 cedis on each trip". The Volunteer stated that one of the workers came up with the idea of marketing the trees in Bolgatanga. "So we tried it," she said, "and it worked out great - certainly we sold a lot more than we would have ever sold around here".

Other Volunteers have also marketed seedlings in some of the local markets, with very good results.

**Extension - Drama:** "Drama works great as an extension tool - everyone loves it", stated one Volunteer. She continued, "we developed a little play - "How trees are going to be good for you and how they are beneficial"; there were four workers involved in the play, and although it was my idea, they loved it".

**Energy Efficient Stoves:** Although none of the Volunteers are yet involved in promoting energy efficient stoves, several have given serious thought to developing such a project. One of the ideas on how this might be done was to work with some women that sell "chop" in the market and put on a demonstration right at the market. The demonstration would be to have women boil water using a "three rock" fire and also a mud stove. Then everyone can see which one will boil the water faster, and which one uses the most fuelwood.

**Promoting CCFI:** The project had press coverage of CCFI activities on several occasions. This has helped the project become "known" as a viable project. Tizza produced a script in the local language about CCFI which was aired on the radio. Recently there was an article in the local newspaper about the CCFI project in Salaga. To initiate extension activities, Tempene had a celebration that was attended by over 2,000 people including local politicians.

**Tee Shirts and Caps:** From money provided by the Catholic Relief Service (money that they promised to give to the project in the initial project development stage of CCFI), Adam Abu of the Forestry Department had tee shirts and caps made with an imprint of the CCFI logo. Although they have been distributed some time ago, people are still asking for them and they have been a big "hit" with the workers and the communities.

## **APPENDIX 7**

### **CCFI EXTENSION PROCEDURES PACKET**

This was produced in Ghana by a forestry consultant and CCFI participants. A description of that packet is on the following page. It is provided here to illustrate what has been developed by the project.



## **CCFI EXTENSION PROCEDURES PACKET**

Prepared under contract by forestry consultant Lawrence Leahy in April 1990, for Peace Corps OTAPS and Peace Corps Ghana. Peace Corps Ghana volunteer Carole Oakley was instrumental developing the packet; all other CCFI volunteers also contributed.

The CCFI Extension Procedures Packet is intended to be used as an extension aid for Peace Corps Volunteers working in the Collaborative Community Forestry Initiative. There are three components to the packet:

- CCFI Extension Procedures Plan;
- Extension Assessment and Activity Record;
- Visual aids

The extension procedures plan outlines the basic steps necessary to carry out tree planting activities in a community. Four goals must be attained in order to have a successful tree planting campaign; each goal should be addressed separately in chronological order. Steps within each goal (noted by capital letters in the outline) should also be covered in order, if possible.

An Extension Assessment and Activity Record should be kept on each village in which the volunteer conducts extension work. Timely completion of this form will allow the volunteer to easily locate pertinent information concerning extension activities in all communities he or she is involved in.

Extension posters and a booklet with suggested discussion topics for each poster are also included in the packet. These posters should be used during specific extension and education activities.

## CCFI EXTENSION PROCEDURES PLAN

### Goal 1. Identify Village to Work In

#### A. Visit village and observe conditions.

1. Determine and follow protocol involving village chief and local government officials upon arrival in village.
2. Look at overall environmental conditions to village.
  - a) Note water supply, current vegetation, and soil type.
  - b) Note signs of deforestation, erosion, and bush fires.
  - c) Note what is being done to deal with these conditions, i.e., woodlots, windbreaks, soil conservation measures, protection against bush fires.
3. Note village's accessibility to the main tree nursery for:
  - a) Extension/education activities
  - b) Transportation of seedlings
  - c) Follow up

#### B. Identify possible groups or individuals to work with

1. Find out which local governmental groups are present in the village, i.e., CDR, Town Development Communities.
2. Find out if private, organized groups are active in the village, i.e., CUSO, ADRA FFW, AMASACHINA, CRS.
3. Find out which individuals in the village are interested in tree planting activities.
4. Determine if above groups have been active and successful.

C. If people recognize usefulness of trees but are not doing anything about it, find out why. Is it lack of money, time, land, labor, technical advice, etc.

#### D. Decide which groups to work with. Factors to consider:

1. Leadership strength
2. Group morale/initiative
3. Past record in development projects

E. Approach those groups that you feel are the best to work with and see if they are interested in a tree planting activity.

**Goal II. Identify which trees are wanted or needed by villagers and where they are to be planted.**

A. Ask villagers questions about what they know, want, or need in regard to trees.

1. What trees are common in the area?
2. What purpose do trees serve in the community?
3. How does the density of trees currently in the village differ from the density of fetish grove density?
4. Where do people go for fuelwood, fodder, building materials, or fruit; what are the distances and hours traveled?
5. Is there a need for more trees to provide fuelwood, fodder, building materials, or fruit?
6. Do people think trees are important to plant and maintain?
7. Are there any types of tree planting activities presently occurring, where did the trees come from?
8. What are the effects of deforestation on the climate, i.e., rainfall, temperature, harmattan?
9. What is the local legislation regarding tree cutting and bush fires as mandated by the District Assembly?

B. Discuss with the villagers planting schemes of specific trees in their area and species appropriate for the planting scheme.

1. Community woodlots
2. Boundary plantings around fields and along roads
3. Fencing
4. Erosion control
5. Windbreaks
6. Agroforestry
7. Amenity plantings, i.e. shade trees in public places, schools, and private concessions (Planting schemes can be discussed in one or two meetings. Visual aids are recommended to stimulate the discussions.)

C. Help the villagers prioritize their most important needs and wants.

1. Preferred Products
  - a) What tree products do men prefer?
  - b) What tree products do women prefer?
  - c) What tree products do school and church groups prefer?
2. Available species that fulfill needs and wants
3. Location of planting site. This is the decision of the community, groups, or individuals; the volunteer should see the site, if possible.



### **Goal III. Organizing villagers who will receive and plant trees**

#### **A. Establishing outplanting site**

1. Who will be responsible?
2. Site must be ready for seedlings prior to their leaving nursery.
3. Recipients must provide tools for site preparation.
4. Volunteer should demonstrate site preparation techniques.

#### **B. Transporting seedlings to the outplanting site**

1. Who will transport seedlings?
2. How will they be transported?
3. When will they be transported?

#### **C. Planting, protecting, and maintaining seedlings; every outplanting should be supervised by someone who has been thoroughly trained in outplanting procedures.**

1. Who will be responsible?
2. Discuss importance of protection and maintenance
3. Demonstrate how to plant, protect, and maintain seedlings
4. Discuss importance of firebreaks

### **Goal IV. Follow-up and Assistance**

#### **A. Immediately after outplanting site visits should occur to check that trees are properly planted, answer questions, give suggestions, and provide encouragement for maintenance and protection.**

#### **B. Visit previous years' planting sites, record survival rates, and record numbers to replant. This should occur six to eight months after outplanting.**

1. Maintenance includes weeding, watering, mulching and pruning
2. Protection is from browsing, fire, insects, and people

## CCFI EXTENSION VISUAL AIDS BOOKLET

### PEOPLE NEED TREES AND TREES NEED PEOPLE

This booklet is designed to provide a format for presenting the visual aids included in the CCFI Extension Procedures Packet. It is not a script; it is intended to be an aid to volunteers in conducting their extension and education activities. What is actually said by the extensionist will vary from village to village and question response to question response.

Pictures 1 through 7 deal with things trees provide for mankind--PEOPLE NEED TREES. Pictures 8 - 10 deal with the extensionist providing technical information involving outplanting the tree seedling--TREES NEED PEOPLE.

Suggested species listed may also vary from village to village.

---

#### PICTURE #1    FUELWOOD

#### PEOPLE NEED TREES

We would like to show you things you can grow on your farms along with yams, groundnuts and other crops.

1. What do you see in this picture?
2. Where do you get firewood?
3. If gather - How far do you travel?  
If purchased - At what cost?
4. Was fuelwood more abundant five years ago?  
Why?
5. Who gathers firewood for your family?
6. What is your favorite fuelwood tree?

Cassia    Acacia    Leuceana    Gmelina    Neem    Albizzia

PICTURES #2      BUILDING POLES - TOOLS - FENCING

PEOPLE NEED TREES

1. What do you see in this picture?
2. Where do you get your poles, tool handles, etc.?
3. What trees do you prefer for above products?
4. How often do you change your roofing poles?
5. If you had a good supply of posts, could you sell them to other people.  
At what cost? What price have you paid for poles before?

Cassia      Teak      Neem      Eucalyptus

---

Picture #3   FOOD TREES

PEOPLE NEED TREES

1. What do you see in this picture?
2. What food does your family presently get from trees in this area?
3. What uses do you have for dawa dawa besides food? What about Kapok?
4. Do some of these trees provide other products for your family?
5. Do you own trees from which your family receives income? If not, would you like to own some?

Mango      Papaya      Shea Nut      Kapok      DawaDawa

---

Picture #4      SHADE

PEOPLE NEED TREES

1. What do you see in this picture?
2. Is there any shade around your compound?
3. What activities do you do under a shade tree? Where is that tree located?
4. What trees make good shade?

Neem   Flamboyant   Cassia   Mango   Gmelina   Mahogany



Picture #5 FODDER AND AGROFORESTRY

PEOPLE NEED TREES

1. What do you see in this picture?
2. What trees in this area do you know that animals like to eat?
3. What have you used as fodder for your animals? Where did you get the fodder?
4. Have you planted trees with your crops? Do you know people who have? If so, what species?
5. What can you use in place of fertilizer to boost your crop yields?

Gliricidia    Acacia    Cajanus cajan    Leuceana  
(Pigeon Pea)

-----

PICTURE #6 EROSION

PEOPLE NEED TREES

1. What do you see in this picture?
2. Do you see erosion on your farms or around your compound? Do you see erosion as a problem?  
What is lost through erosion?
3. How would you stop erosion on you farm or around your compound?

Mahogany    Kapok    Mango    Neem    Albizzia    Eucalyptus

-----

PICTURE #7 LANDSCAPING - BEAUTIFICATION

PEOPLE NEED TREES

1. What do you see in this picture?
2. What trees do you have growing around your compound?
3. Have you ever considered trees as protection?  
Ex. Wind break. Ex. Erosion control.
4. What tree do you like to see in bloom?
5. Do you have fruit trees near your compound?

Mango    Papaya    Mahogany    Neem    Kapok    Flamboyant

PICTURE #8

PLANTING TREES

TREES NEED PEOPLE

1. What do you see in this picture?
  2. How would you plant a tree in a polybag? A stump? A strippling?
  3. When you plant a tree, what type of soil do you like to see?
- 

PICTURE #9

WATERING

TREES NEED PEOPLE

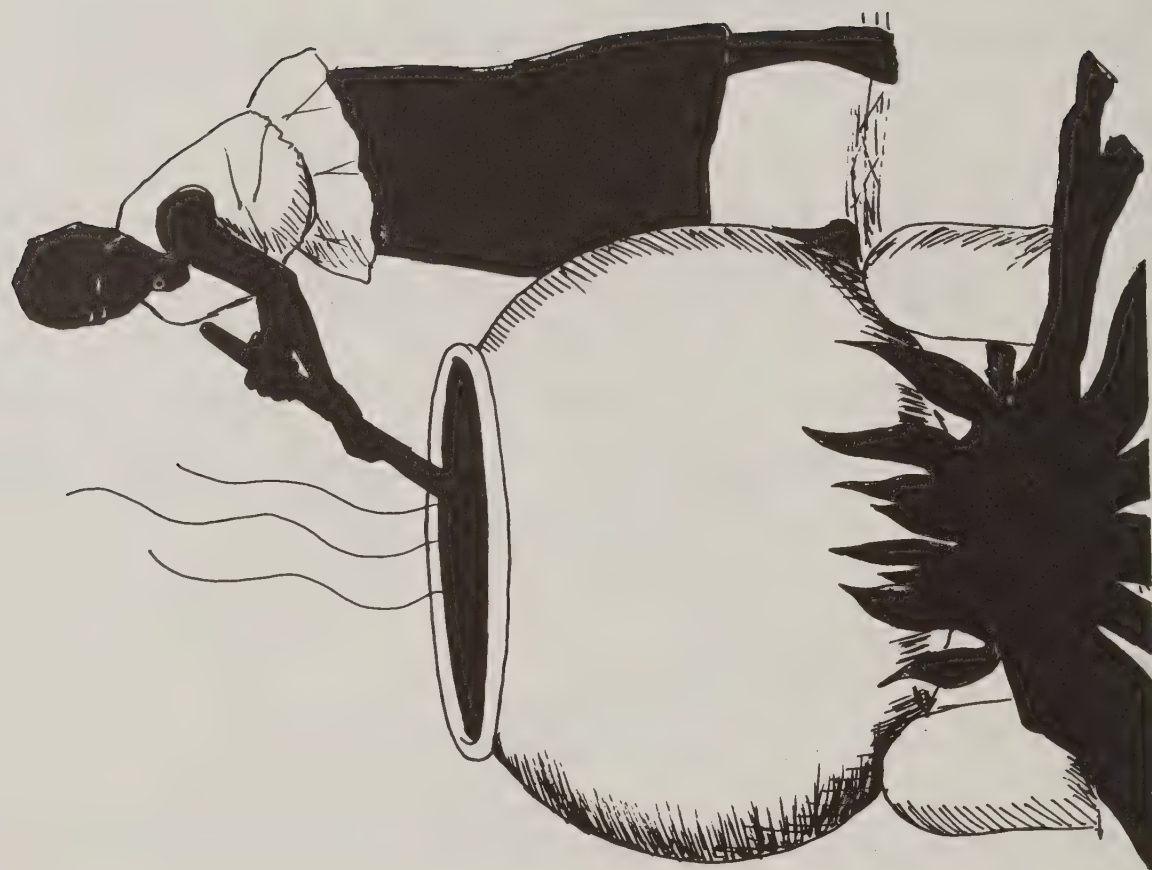
1. What do you see in this picture?
  2. When should you outplant trees?  
Why?
  3. If rains do not come and you do not water, what will happen to the seedlings?
  4. If you are watering, what is the best time of the day to water?
  5. What can you do to help the seedlings hold water?
- 

PICTURE #10

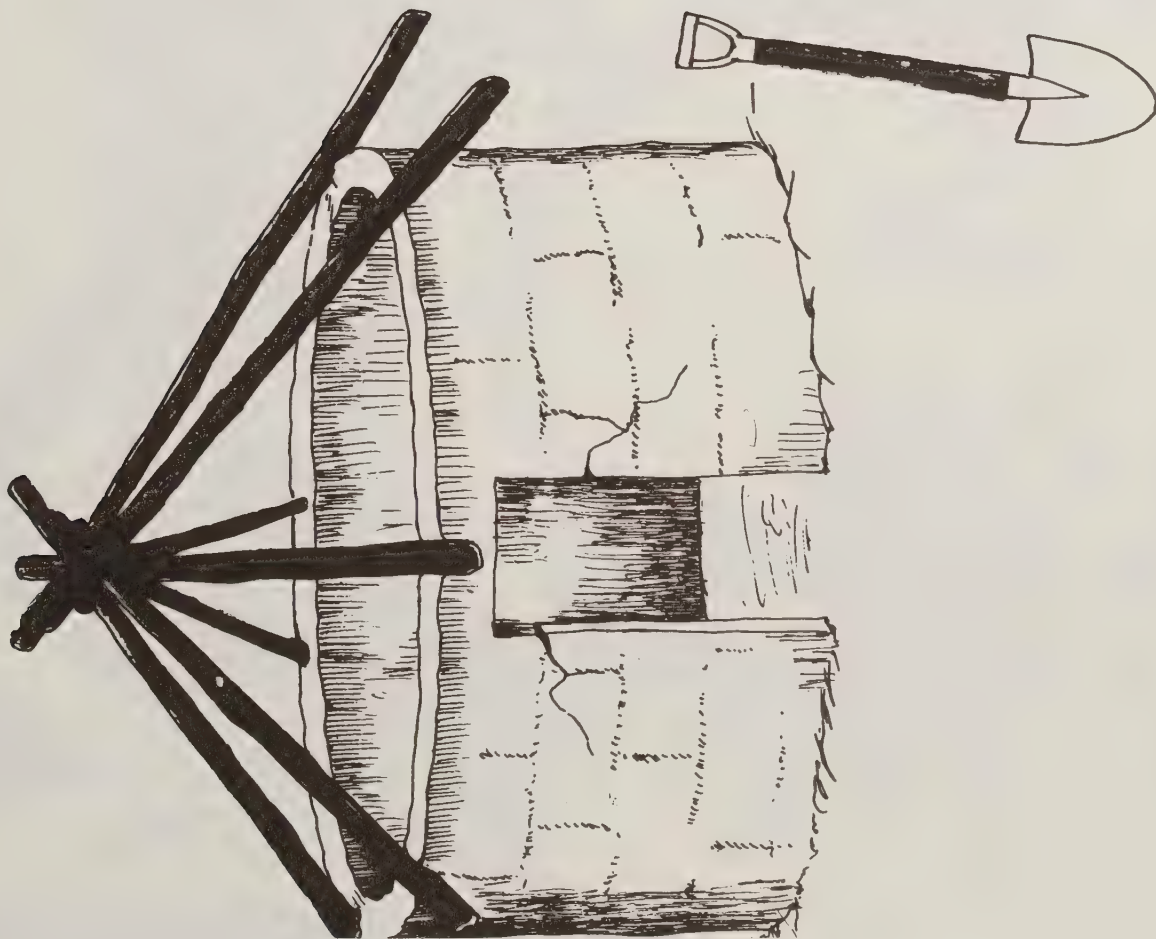
PROTECTION

TREES NEED PEOPLE

1. What do you see in this picture?
2. Why do trees need to be protected?
3. What is available to use as protection?
4. If mud walls, why should protection be installed after the rainy season?
5. Do you protect your crops?  
When? How?





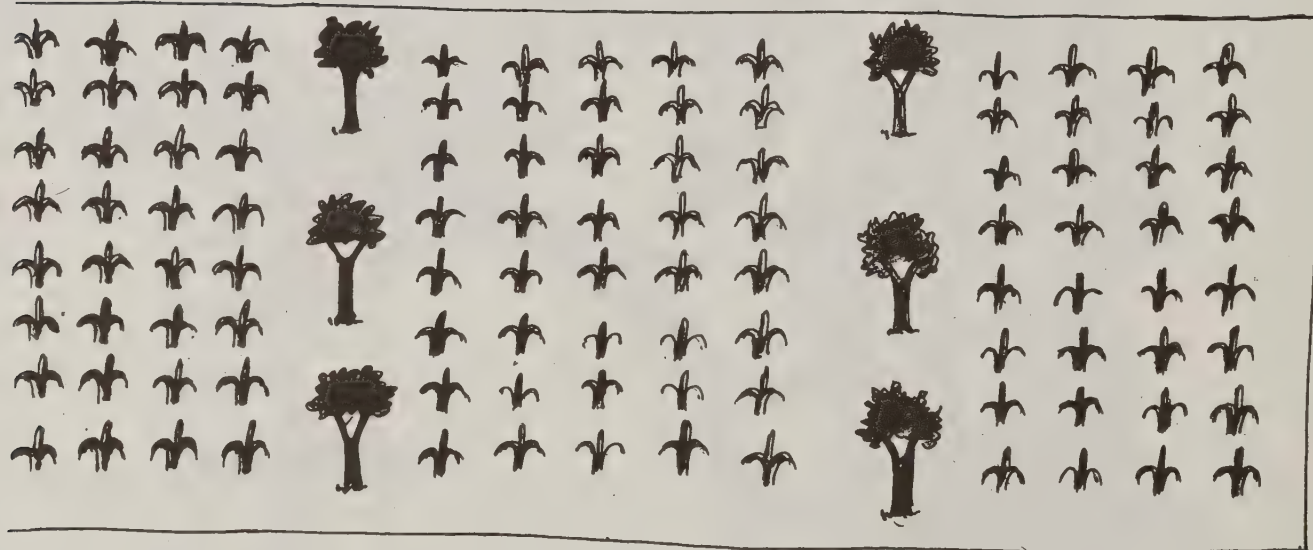


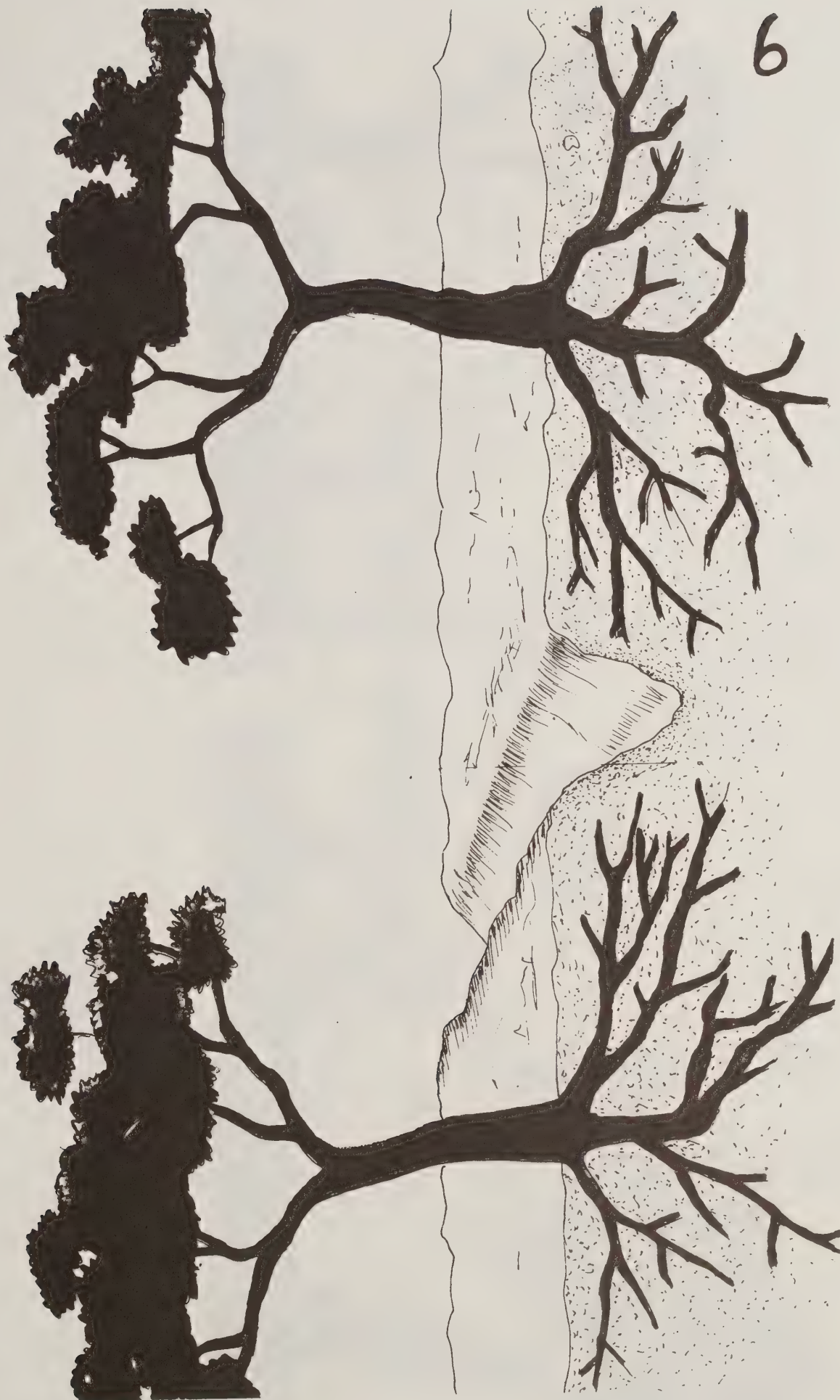








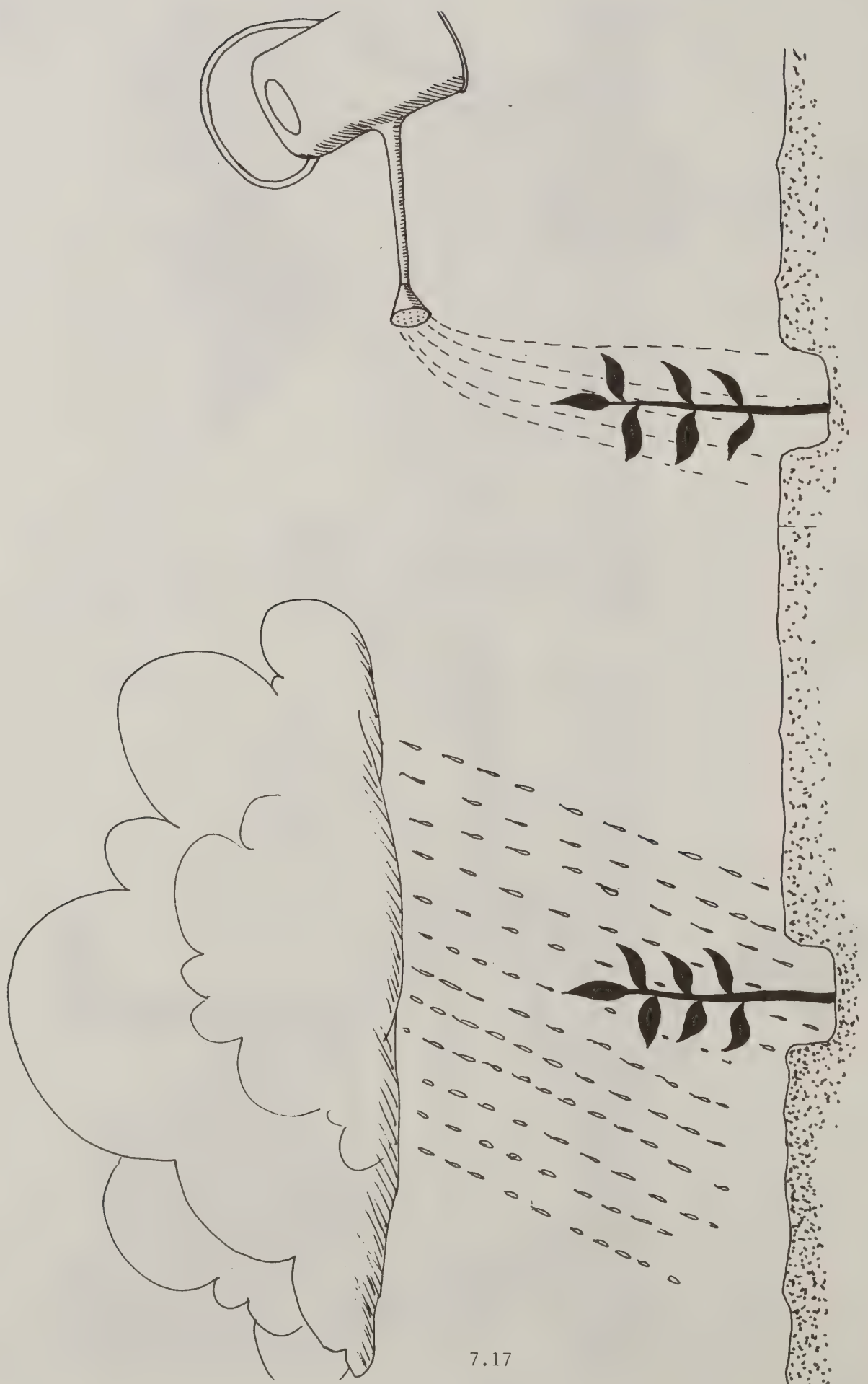
















## **APPENDIX 8**

### **CCFI STRATEGY FOR NURSERY SELF - SUFFICIENCY**

This strategy was developed in Ghana by CCFI participants. It is included as a reference and as a discussion paper.

## STRATEGY FOR SELF SUFFICIENCY

The goal of the Collaborative Community Forestry Initiative (CCFI) is that of self-sufficiency after the sponsoring agencies of the project withdraw from the program. These agencies being the Adventist Development Relief Agency (ADRA), the U.S. Agency for International Development (U.S.A.I.D.), the Environmental Protection Council (EPC), Ghana Forestry Department, U.S. Peace Corps and Amasachina. The original vision of the project was to have 20 community based nurseries on the ground within five years of 9 November 1987. These nurseries placed in sponsoring communities would then become self-sufficient after five to six years of management. It was felt, at that time, that this would be an adequate period of time to pass on the technical skills and develop alternate sources of revenue to make up the lost income provided by the sponsoring agencies.

In the fall of 1990 at the CCFI Annual Review Workshop held in Tamale, in the Northern Region, this goal was re-evaluated and adapted to fit today's working model. At this time there are 11 working nurseries within the project, ranging from those in their third year of production (Chereponi and Salaga in the Northern Region and Bongo in the Upper East) to those that are in their first year (Tongo and Zebilla in the Upper East and Sankana in the Upper West). The other five being Libga and Tolon in the Northern Region, Timpani and Yurwelko in the Upper East and Tizza in the Upper West. Although the site at Tizza was established in 1989, production did not begin until 1990. This was due to the loss of the CCFI Manager in the upstart stages of the program there. At the workshop it was felt that most nurseries would need 8 to 10 years before self-sufficiency could be obtained. A time table was developed along with possible secondary income generating projects and is as follows.

### CCFI STRATEGY FOR NURSERY SELF-SUFFICIENCY

CONCEPT: Community Owned Business - all profits recycled into business.

TIME TABLE: 8 to 10 years to become financially self-sufficient.

Year 1 - Plant variety of tree seeds.

Year 2 - Establish woodlots/Agro-forestry plot, graft fruit seedlings, sell local/other fruit seedlings (perhaps to fund purchase of grafted mango seedlings).

Year 3 - Establish fruit orchard on donated land, sell grafted mango seedlings other and other fruit seedlings.

Year 4 - Sell fruit seedlings, establish more woodlots/orchards if land is available.

Year 5 - Sell fruit seedlings, may start selling fuelwood and/or some fruits.

Year 6 - Status Quo.

Year 7 - Start selling rafter and construction poles.

#### POSSIBLE SECONDARY INCOME GENERATIONS PROJECTS.

- Sale of seeds.
- Sale of tools.
- Sale of clay stoves.
- Raising beehives or rabbits.
- collection of sheanuts to COCOBOD
- Sale of Agro-forestry crops.

\* These secondary projects should be introduced after training of the nursery workers is completed and the nursery is running efficiently. Secondary projects should never shadow the primary goal of the project, which is the raising and outplanting of seedlings to the participating communities.

This brief report looks at the potential of self-sufficiency and how much revenue must be generated by each CCFI nursery, to maintain the level of income that is now at the CCFI sites.

Within the project itself there are two types of nurseries - so-called traditional nurseries (eight in all) and three "pilot" nurseries, these being located at Bongo, Libga and Sankana. In the report the maximums will be utilized, i.e., maximum number of workers hired by each type of nursery management style.

At the traditional nurseries it was proposed that there would be ten full-time trainees, who would produce 60,000 seedlings per year. These trainees would receive a payment of 6000 cedis month. Along with this cash payment each trainee is allocated a monthly food for work (FFW) stipend provided through ADRA. This FFW per trainee is 1/2 bag of rice (16.33kg.) and one gallon of vegetable oil. Seasonally the value this FFW varies, but it has an estimated value of 8000 cedis at today's prices. Thus, those ten full-time trainees at the traditional nurseries, more or less, are receiving a monthly payment worth 14,000 cedis. Therefore, **at today's level, it costs 140,000 cedis a month or 1.68 million cedis a year to provide income at the traditional nurseries.**

At the pilot nurseries a different type of payment schedule has been incorporated. The workers within these nurseries are paid ten cedis for each tree produced that can be outplanted come the rainy season. The workers are paid three times a year, 20% in January, 30% in April and the remaining 50% after the trees are outplanted. As with the above traditional nurseries, the workers receive a monthly stipend of FFW.

A target of 100,000 seedlings produced by outplanting season has been set at the pilot nurseries. Thus, if maximum production is reached a total payment of one million cedis will be made each of the pilot nurseries. To reach this target each nursery can contract up to 20



workers who are then individually paid for the seedlings they produce. Therefore, if 20 workers produce a maximum of 5000 trees each, every worker will eventually receive a total payment of 50,000 cedis within the year, plus FFW. Taking the above value of 8000 cedis/month/worker for FFW, will cost an additional 160,000 cedis a month or 1.92 million cedis a year. Thus, **at today's levels, it costs up to 2.92 million cedis a year to run the pilot nurseries in the projects.**

This maximum, as has been stated, will be utilized in this report though the number of workers at the pilot nurseries varies. Bongo has contracted 15 workers, making it's maximum annual payment 2.44 million cedis, whereas Libga has 16 workers, making maximum annual payment 2,536,000 cedis. At the time of this writing Sankana is in the initial start up phase and the number of workers has not been determined.

**Beyond just the annual income payments** that are made to the workers in both management styles, traditional and pilot, **other costs are incurred.** These costs will eventually vary from nursery to nursery and year to year, thus an estimated average will be utilized.

Each nursery produces both bare root stock and that stock produced in the plastic pots, these pots at today's prices costs seven cedis a piece. If a nursery uses 10,000 pots a year this incurred cost will be 70,000 cedis annually at each nursery. To fill these pots, soil will need to be collected, usually by hiring a tractor from one of the surrounding communities. Petrol, oil and payment to utilize this tractor twice a year may cost up to 20,000 cedis or 10,000 cedis each time it is utilized. This value was determined by what it cost the nursery manager in Libga each time when one was used for the project.

Maintenance and replacement of tools will invariably be required and a arbitrary value of 50,000 cedis annually has been attached to this. Transportation from time to time will be required at each of the nurseries for reason or another. Examples of this include, but are not limited to, receiving technical advice from Ghana Forestry, extension work before and after outplanting and collection of seed. For nurseries such as Libga and Tolon which are no more than 25 kilometers from Tamale this will be low. But, those such as Chereponi, which is 50 to 60 kilometers from the nearest District Forestry Office, this cost will be far more substantial. For an average this report will use 25,000 cedis annually per nursery.

Other incidents will eventually be needed, some foreseen, such as seed costs, nails for fencing, hinges for gates, desilting of dugouts and so on, and others that at this time are unforeseen. In some years these costs will be non-existent and in others it will be burdensome to the nursery site. An example of this is the desilting of a dugout may cost somewhere up to two million cedis. Thus, **an annual value of 250,000 cedis has been determined for these incidental costs.**

Thus, at today's levels, it has been estimated that it would cost 1,955,000 cedis annually to maintain a traditional nursery at present levels. The pilot nurseries would cost 3,075,000 cedis annually to operate. A breakdown of item/costs is found at the end of this report.

As with the aforementioned time table these values are arbitrary and will vary from nursery to nursery and year to year. This is just to give us an idea of what each nursery should strive to work towards and with each passing years experience revisions will be needed to be made.

Breakdown of Item/Costs for both Nursery Management Schemes (values in cedis)

<u>Traditional</u>		<u>Pilot</u>
720,000	(annual salary for ten workers)	1,000,000 (payment of ten cedis/tree for 100,000 trees)
960,000	Value of annual FFW distributed at nursery	1,920,000
70,000	Annual cost of 10,000 (pots at 7 cedis/each)	70,000
20,000	Tractor costs	20,000
50,000	Maintenance and replacement of tools	50,000
25,000	Transport	25,000
<u>250,000</u>	Incidentals	<u>250,000</u>
2,095,000*		3,335,000**

\* Cost per tree at traditional nurseries, using the above costs and a target of 60,000 seedlings per year is 34.92 cedis per tree.

\*\* Cost per tree at pilot nurseries, using the above costs and in a target of 100,000 seedlings per year is 33.35 cedis per tree.

## APPENDIX 9

This Appendix is a comparison of the CCFI sites working with the traditional approach and the "pilot" approach.



## APPENDIX 9

### NURSERY WORKER COMPENSATION STRATEGY "RECORD" REQUIREMENT<sup>1</sup>

#### A. "Pilot" Project

Payments based on the number of seedlings produced.

CCFI will pay quarterly - to be partly refunded after sale of  
Until project becomes self sufficient.

Uniformity in pay for equal work.  
i. e., ten cedis/seedling plus FFW monthly. The amount of seedlings should be revised.  
(To be approved by National Committee)

Recommended one new site becomes part of this pilot project. According to sufficiency of water supply, i.e., Sankana or perhaps Tizza.

In case of natural disaster, CCFI has a plan to compensate the workers for income lost.

#### B. Traditional System

Self employed - CCFI is seen as the facilitator, NOT employer. Regional Committee will recommend policies for approval by National Committee before 15 November.

The number of workers depends on the production production target with a maximum of ten workers

Wages increased. Full time receive 6,000 cedis and FFW monthly will be phased out and wages (money) should be increased.

Social Security contribution is ruled out as workers are self employed.

Revenue from sale of seedlings and other income generating activities will be used to phase out support, leading to self-sufficiency. Regional Committee will recommend policies for approval by National Committee before 15 November.

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<sup>1</sup>CCFI FY 1990 - 94; Funding Proposal; Submitted to the Ministry of Lands and Natural Resources; National Coordinating Committee CCFI, January 1990.

## APPENDIX 10

This appendix is the criteria for CCFI site selection that was developed in the December, 1987, workshop held in Accra, Ghana.

## APPENDIX 10

### CRITERIA FOR COMMUNITY\* SELECTION

1. Enthusiasm of the community and interest in tree planting.
2. Need; must be in stress area, (shortage of fuelwood, low soil fertility). as defined by the Forestry Department.
3. Sufficient water availability - either existing or potential.
4. Organizational base, open to education and training.
5. Prior experience in tree planting and/or demonstrated success with development projects.
6. Accessibility.
7. Personnel for nursery management.
8. Means of water supply maintenance; levy maintenance.
9. Land for woodlots/nursery that can be granted permanently.\*\*
10. Token payment for seedlings will be a community decision.
11. Final approval of sites by Forestry Department, ADRA and Amasachina, with the Peace Corps input based on the above criteria.

**Notes:**

- \* = Definition of community does not necessarily mean an entire village. Could be one or two extended families working together.
- \*\* = Land free of "land tenure" problems.



## **APPENDIX 11**

### **QUESTIONNAIRE FOR SECOND YEAR VOLUNTEERS**

This was developed by CCFI participants. It is provided here to indicate the types of feedback a second year Volunteer is asked to provide.

## QUESTIONNAIRE FOR SECOND YEAR FORESTRY VOLUNTEERS

1. As far as working with the local people, what trees did you find best or easiest to outplant and how did you outplant them (i.e. shade, woodlot, live fences, schools) and for what purpose (i.e. fruit, firewood, etc.)?

Tree	Outplanting Scheme	Purpose
------	--------------------	---------

2. What trees did people most request and for what purpose?

Tree	Purpose
------	---------

3. What trees did you grow that you found difficult to convince people to outplant?

Tree	Reason for Difficulty
------	-----------------------

4. What trees survived outplanting the best and the worst?

Best Survival	Worst Survival
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5. In what quantities would you suggest next years volunteers to plant for each major species, how (bareroot or pots), and purpose?

Tree	Quantity	Purpose
------	----------	---------

6. What size woodlots did you find the most effective (i.e. the size easiest to protect and care for)?

7. What trees did you use for agroforestry? What successes and failures have you found? Include information on species, spacing, intercrops, field size and type (alley cropping, band cropping, border fencing).

Tree	Spacing	Intercrops	Type
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8. What were your major constraints and if applicable to other sites, how do you suggest to solve or get around them?

9. Make suggestions or describe techniques you used in doing extension work. Include the following:

- Finding outplanting sites-
- Educational information transferred and mode of transfer-
- Length of each visit-
- Number of visits per village-
- Who in the village did you work with and how was he/she found-
- Number of workers involved in site prep and tree planting-
- How was a foreman chosen for each operation-

If you used flying nurseries, how were they set up, people in charge found successes and failures, number of trees involved and suggestions.

10. Any recommendations on nursery operations, techniques, or man hours per task.

What to do about insect attacks or rodent colonies?

What successes or failures did you find in cuttings, graftings, and direct seeding?

11. In your area what trees are most desirable for:

Firewood-	Agroforestry-	Bee Forage-
Charcoal-	Erosion Control-	Tannin-
Building Poles	Soil Improvement-	Dye-
Fruit-	Shade or Ornamental-	Tools-
Fodder(if any)-	Soap-	Mortars-
Windbreak(if at all)-	Gum-	Pestles-
Fencing(live and dead)-	Rope-	Medicine-

12. Submit information you gathered on each tree raised in your nursery in regards to: (use extra paper if necessary)

- a) Seed collection
- b) SPT (successes and failures)
  - c) Germination rate, time to germinate
  - d) Time to mature in nursery (pots or bareroots)
  - e) Flowering months and fruiting months
  - f) Foliage retention (deciduous or evergreen) (time of year)
  - g) Outplanting spacing and scheme
  - h) Establishment problems (weeds browsing, fire, children)







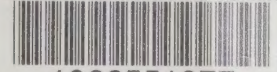












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# Snapshot of Ghana 1/

**Population**—There are 14.8 million Ghanains. While the population is made up of many tribal groups, there is a great pride in the national identity and the collective culture of the country. Most of the population is concentrated along the coast, in the northern areas near Côte d'Ivoire, and in the big cities. About 42 percent of the people are Christian, 38 percent are indigenous and 12 percent are Muslim.

**Land Area**—Covering 92,100 square miles, Ghana is about the size of Illinois and Indiana combined.

**Major Cities**—Accra, a seaport city with 954,000 residents, is the capital. Kumasi is the second largest city with 399,300 people. Other key cities are Tema and Sekondi-Takoradi.

**Languages**—Ethnically, Ghana is divided into small groups speaking more than 50 languages and dialects. English, the official language, is taught in all the schools. However, only about 30 percent of the population is literate in English. Among the more common linguistic groups are the Akans, concentrated along the coast and forested areas north of the coast; the Guans on the plains of the Volta River; the Ga- and Ewe- speaking peoples of the south and southeast; and the Moshi-Dagomba-speaking tribes of the north.

**Location and Geography**—This West African nation is situated on the Gulf of Guinea just north of the Equator. Its 334-mile-long southern coastline, which runs between Côte d'Ivoire and Togo, is mostly a low, sandy shore backed by plains and scrub and intersected by several rivers and streams, most of which are navigable only by canoe. A tropical rainforest belt, broken by heavily wooded hills and many streams and rivers, extends northward from the shore, near the frontier of Côte d'Ivoire. North of this belt, the area is covered by low bush savanna and grassy plains. To the north, Ghana borders Burkina Faso.



**Climate**—In this tropical country, the eastern coastal zone is warm and comparatively dry while the southwest corner is hot and humid. Northern regions also are hot and dry. In the south, the rainy seasons come in May-June and August-September. The rainy seasons tend to merge in the north.

**History and Government**—Formerly known as the Gold Coast, the country was renamed Ghana because present-day inhabitants were thought to have descended from migrants who moved south from the ancient kingdom of Ghana. The first contact between Europe and the Gold Coast dates from 1470, when a party of Portuguese landed, building Elmina Castle as a permanent trading base two years later. It became a center for a thriving slave trade involving competing Dutch, French and English companies. A collection of nations controlled various portions of the coastal areas for the next three centuries with the British eventually gaining the dominant controlling role in the 19th century. Ghana gained its independence from the United Kingdom in 1957. In 1969, the government was returned to civilian authority. From 1969 to late 1981, a series of coups — both violent and bloodless — occurred. In 1981, a constitution adopted in 1979 and modeled after western democracies was suspended; the president, cabinet and parliament were dismissed; and a seven-member Provisional National Defense Council (PNDC) maintained a unitary government. Since 1982, the authoritarian government has continued to decentralize. Ghana continues to be governed by PNDC directives and without a constitution.

**Economy/Industry**—The area near the border of Côte d'Ivoire, known as the "Ashanti," produces most of the country's cocoa, minerals and timber. Ghana's rich and diverse natural resources primarily consist of gold, diamonds, bauxite, manganese, timber and fish. More than half the population is engaged in farming. Two-thirds of the nation's export revenues are derived from cocoa and cocoa products. Other major agricultural crops include yams, rice, millet, peanuts, sorghum, palm oil, coconuts, coffee, cassava, corn and rubber. Industries include mining, lumber, light manufacturing, fishing and aluminum.

**Peace Corps**—Peace Corps Volunteers entered Ghana in mid-September of 1961. Currently, there are 100-plus volunteers in Ghana.



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